STATE OF WYOMING

2008

ANNUAL REPORT

OF THE

STATE ENGINEER'S OFFICE

STATE BOARD OF CONTROL

BOARD OF REGISTRATION FOR
PROFESSIONAL ENGINEERS AND
PROFESSIONAL LAND SURVEYORS

STATE BOARD OF EXAMINING WATER WELL DRILLING
CONTRACTORS AND WATER WELL PUMP
INSTALLATION CONTRACTORS

October 1, 2007 through September 30, 2008

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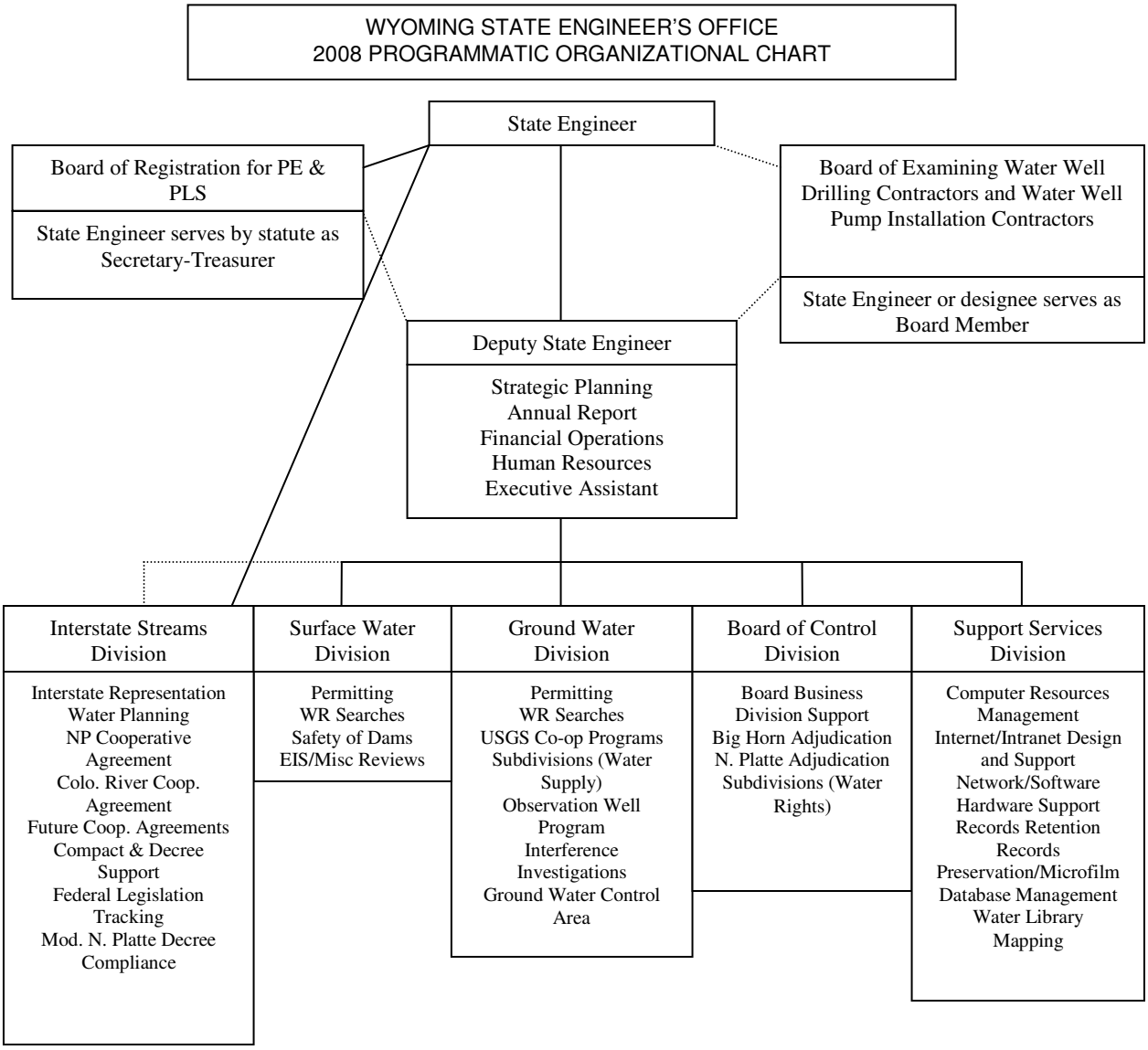
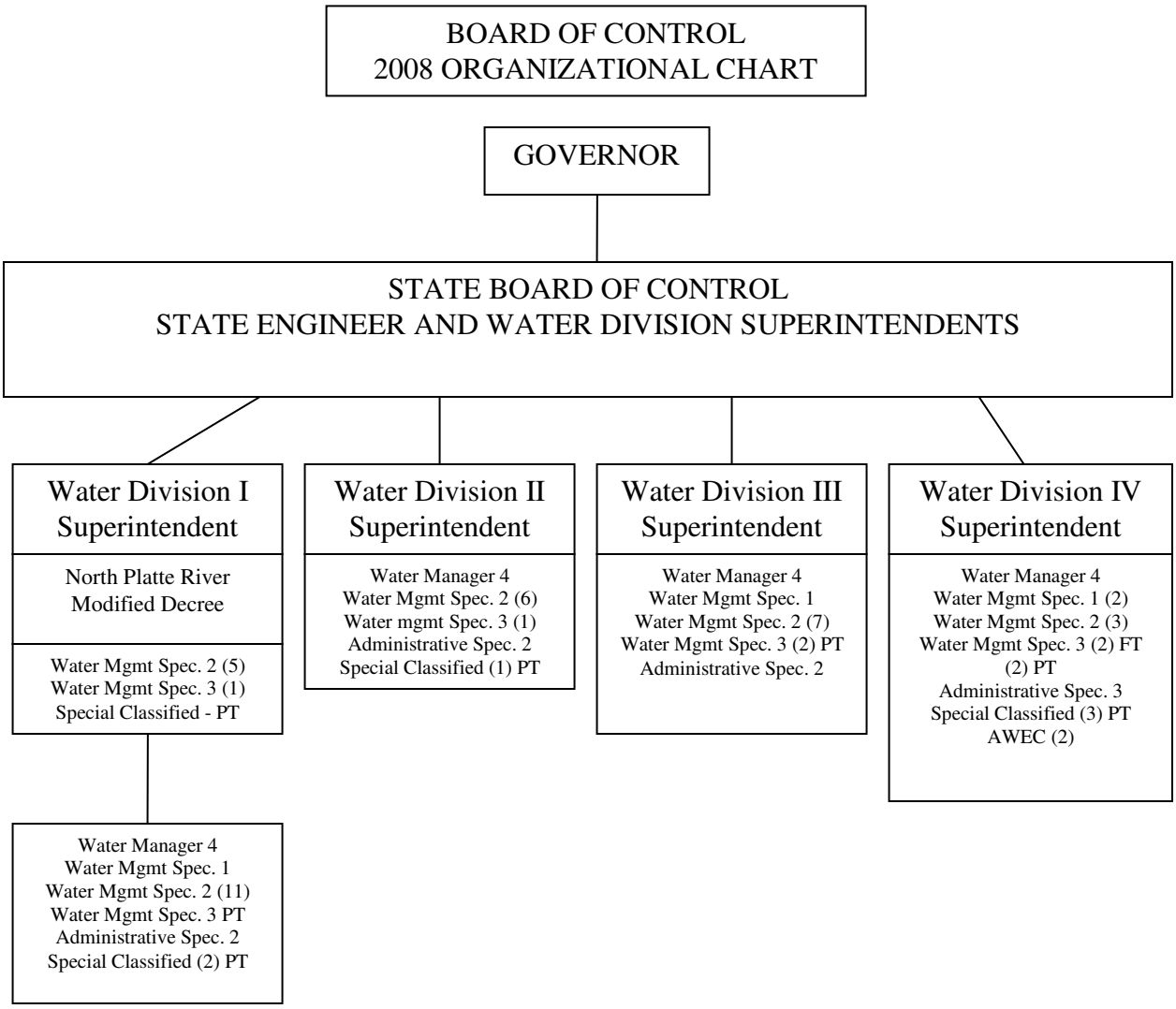


———	Primary Reporting Relationship (performance evaluations, workload determination, leave slips, etc.)
.....	Secondary Reporting Relationship (general agency information dissemination, personnel grievances, etc.) – Deputy must be kept informed of important issues routinely, especially in the absence of the State Engineer.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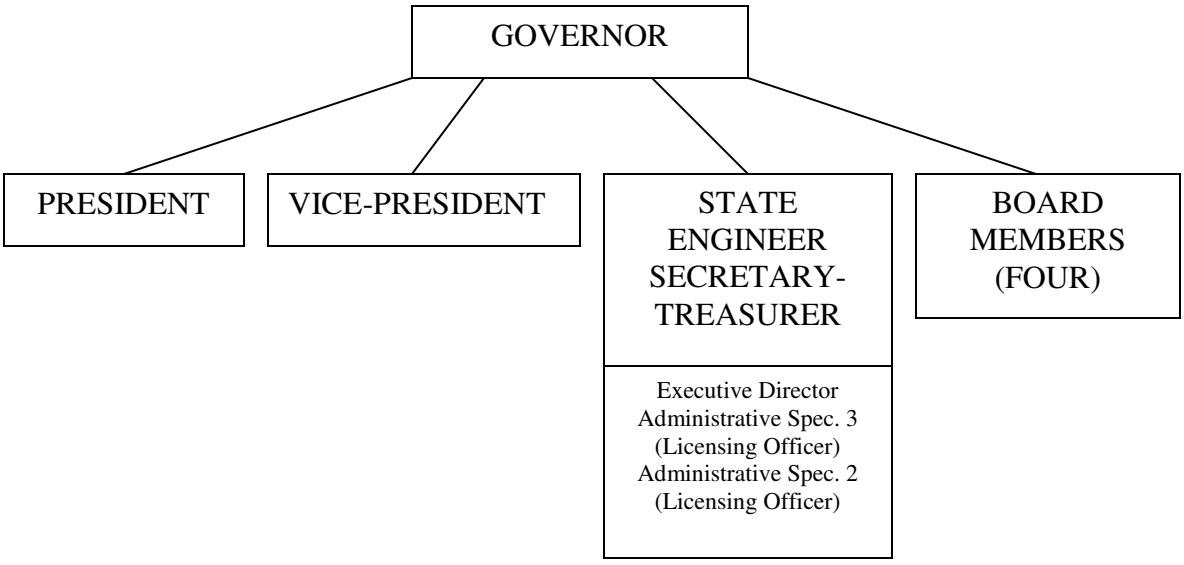

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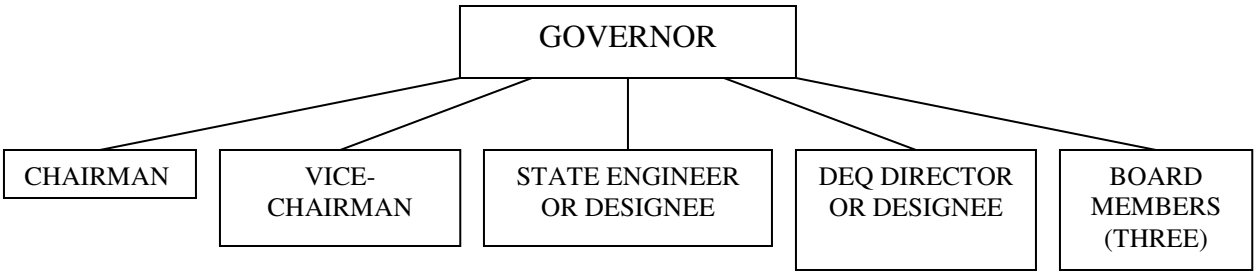


Report of the State Engineer

Patrick T. Tyrrell, P.E.

It is my pleasure to report that water year 2008 was very good to the State of Wyoming. For the first time in my tenure (beginning in 2001) we had what could be termed a near normal runoff. Routine snows over the winter (some heavy in the mountains) followed by a cool and snowy spring, kept our high elevation snowpack intact and plentiful. Even the melt out, which thankfully peaked in the normal early summer timeframe rather than April or May, was slowed and extended by cool weather from late spring into June. Most major reservoirs around the state, including Buffalo Bill, Boysen, Fontenelle, Jackson Lake, and Yellowtail, filled. On the North Platte system, all reservoirs save Seminoe Reservoir filled, and even it accrued approximately 200,000 acre-feet. Seminoe Reservoir was last full in 1999, and had not accrued any significant water since that time. Harkening back to last year's annual report, users in the Casper-Alcova Irrigation District (the Kendrick Project, served by Seminoe and Alcova Reservoirs) were in jeopardy of running out of storage by 2009 if no water accrued in Seminoe. It did, thankfully extending their usable water for a few more years. In the Laramie River system, storage accrued to both Wheatland No. 2 and Grayrocks Reservoirs, although neither completely filled. In general, this year was a boon to Wyoming water users compared to the previous eight. Our field staff, while busy, I'm sure found their jobs easier if for no other reason than constituents with water are generally much happier than when they are without.

Lawsuit Update

In 2008, Wyoming and this office were the subject of several ongoing legal challenges related to water. The State of Wyoming continued a dispute with Montana over our operations under the Yellowstone River Compact. Aimed at only the Tongue and Powder River Basins (the Big Horn and Clark's Fork Rivers are also covered under the Compact but are not subjects of the complaint), this suit finds venue in the United States Supreme Court, which has original jurisdiction over disputes between states. Originally filed in 2007, 2008 saw the Supreme Court accept Montana's complaint, only then to allow Wyoming to file a "motion in the nature of a motion to dismiss." This motion was filed in early calendar 2008, and was responded to by Montana and the U.S. Department of Justice (in their Trust role for the Northern Cheyenne Tribe in Montana). Later in 2008, the Supreme Court named a Special Master on the suit, Mr. Barton H. Thompson, Jr., a Stanford University law professor who at one time had clerked for Justice William Rehnquist. In 2009 the parties will argue the case for dismissal in front of the Special Master, and we should know next year whether, or how, this case will proceed.

Intrastate, we are still involved in two suits mentioned in last year's annual report. The "West/Turner" suit continues, even though it was dismissed by District Judge Pete Arnold (Cheyenne). Plaintiffs appealed the dismissal to the Wyoming Supreme Court where oral arguments were heard in December of 2008. No decision has been rendered. This suit is aimed

primarily at our permitting of coal bed natural gas (CBNG) wells and reservoirs, in particular at the process which does not require public notice prior to permit issuance. Since many CBNG features are not permanent, and therefore are not being adjudicated, the argument is the public is not adequately represented or noticed before these features are permitted and constructed. The plaintiff's attorney describes this as a statewide "public interest" lawsuit challenging our permitting and adjudication processes, and I agree, particularly since no specific remedy is sought for either Turner or West. The outcome of this case, if we lose, could have a significant effect on our long-standing statutory permitting processes.

The second intrastate case was also mentioned in last year's annual report. It involves a challenge by a plaintiff (the Rivetts) to our processes for appeals of water commissioner, and superintendent, actions. And, it involves an important test of our ability to regulate ground water connected to surface water. Arising on Bates Creek south of Casper, the contested issue involves how we responded to appeals of the water commissioner's decision, as upheld by the superintendent and me, to regulate off wells known to be hydrologically connected to Bates Creek itself. First, the complaint says we did not adequately make the hydrologic connection (i.e. "same source of supply") determination, and second, that the appeal should have occurred under a contested-case-type procedure. We disagree on both allegations, and are actively defending this suit. In 2008 we again regulated Bates creek in the same manner, and Rivetts appealed again, as did another appropriator by the name of Whisler. Whisler entered the suit in 2008, and now the combined "Whisler/Rivett" suit sits in district court. As of this writing, no decision has been received.

2008 Budget Session

The agency was treated well during the 2008 legislative session. Without going into great detail, we received three positions (two in the Ground Water Division and one in Water Division II) primarily aimed at continuing to improve our responsiveness to CBNG issues. We also received additional money for adding real-time data acquisition capabilities (telemetry equipment and software) to up to 250 existing streamgages, ditch and canal measuring devices, and reservoirs, statewide. Totaling near $1.6 million, this effort will greatly enhance our ability to follow streamflow, diversion, and reservoir data from the Cheyenne and field offices. Once complete, these measuring locations will relay data describing current conditions by satellite to servers that will be able to feed the data to our desks and to the public, reducing unnecessary field visits and improving reaction time to changing conditions. Remote sensing of hydrologic and hydraulic information is becoming much more common west-wide, and we are pleased the legislature and the Governor agreed with us that it is time for Wyoming to invest in this type of infrastructure.

The budget session also resulted in updated (and increased) funding for USGS cooperative programs, money for drilling additional monitoring wells around the state, and IT enhancements. In all, we did well in the budget process and we appreciate the Governor's, and the legislature's continued trust and investment in our important water work.

A bill dealing management of water discharges from CBNG operations, crafted by a task force which completed its work in the fall of 2007, was advanced as a Minerals Committee bill. This proposed legislation would have declared discharges in excess of natural channel capacity unlawful and would have allowed the State Engineer to order construction of increased conveyance capacity in reaches of channel within ephemeral and intermittent drainages where such capacity did not exist. The bill, aimed at reducing damages to and complaints from landowners downstream of uncontrolled CBNG discharge points, passed committee in the senate but died on the floor. It is anticipated another bill on this subject will be attempted in 2009.

One important non-budget bill passed during the session. The bill requiring licensure of water well drillers and water well pump installation contractors, vetoed by the Governor in 2007 due to definitional inconsistencies, finally passed. This was a milestone action for Wyoming, as we were arguably the last state in the lower 48 that did not have some form of mandatory licensure or registration of water well drillers. The law requires licensure of well drillers, a continuing education regimen, and empowers a governing board to take action against drillers, if necessary, to protect the health and welfare of the public. This type of legislation has been supported and advanced by this agency for over 25 years, so its passage is a long overdue "win" for the agency and our constituents. Its primary effect should only be to raise the bar of performance in this important profession by providing a heretofore unavailable mechanism for assuring competence and enforcing prosecution of illegal or unethical practices. The board's activities will be funded by registration, renewal, and examination fees and a $25 increase to well permit application fees, which, even after this increase, will remain among the lowest in the west. The only drawback to the law is that drillers of CBNG wells (which are essentially water wells, and can be converted to other traditional uses after CBNG production ceases) were exempted following strong lobbying from the industry. Therefore, the permit fee increase, and licensure requirements, apply strictly to the drilling of stock, domestic, municipal, industrial, and other miscellaneous wells not associated with CBNG.

Coal Bed Natural Gas

In December of 2007 we embarked on an effort to investigate CBNG wells known to have produced nothing but water (i.e. no gas) for extended time periods. This effort, prompted by reports in early 2007 by the Wyoming Geological Survey specifically focused on the Clear Creek and Crazy Woman Creek (tributaries of the Powder River) watersheds, was simply aimed at ensuring that the production of water from wells permitted for the production of natural gas did in fact produce gas, or had a reasonable expectation of doing so. Otherwise, the mere production of water to hold leases or please investors could be construed as a waste of water in a region where ground water might be the only viable supply for other uses. This effort initially targeted about 300 wells in those initial drainages in late 2007/early 2008. Using an approach which required the operators to "show cause" why their permits should stay in good standing if they were not producing gas, this initial effort resulted in 197 well permits being cancelled (many of

the subject wells were already in some phase of being shut in or abandoned) and 86 permits being suspended.

A second round of "show cause" letters were sent in August of 2008, targeting the remainder of the CBNG well permits in the state that were in excess of 5 years old and had a history of water, but no gas, production. This effort targeted 992 wells and resulted in 192 permits being proposed for cancellation initially, and 294 proposed for suspension. The final outcome of the August 2008 effort is not yet complete as due process on cancellation notices or requests for hearings (or settlement conferences) has yet to run its full course.

As 2008 wore on, weaknesses in the national economy expressed as a falling stock market, rising rates of foreclosures, and other banking/investing troubles were accompanied by weak natural gas demand and dropping prices of that commodity. All this was occurring as gasoline prices soared to near $4 per gallon late in the year (only to drop precipitously shortly thereafter due to a drop in demand). The odd juxtaposition of wildly fluctuating supply and demand effects for these resources, and the depressed price of natural gas, put a chill on investments in natural gas prospecting. The net result on this agency was the observed reduction in both CBNG well and reservoir permit applications. It is expected that this drop off in activity will continue through 2009 and into 2010.

Interstate Streams Issues

During 2008, we again saw significant activity involving our major basins and interstate water issues that routinely arise. The lawsuit on the Tongue and Powder Rivers mentioned earlier will not be revisited here.

The North Platte River saw much activity related to the State of Wyoming's involvement in the Platte River Recovery Implementation Program (PRRIP), particularly as regards the state's contribution of water from the proposed Pathfinder Modification Program (or PMP). Initially, the largest issue was a petition filed by the Bureau of Reclamation to change the use of, by adding new uses to, the permit and certificate for Pathfinder Reservoir. Contested loudly by interests above Seminoe Reservoir who felt the PMP, by recovering storage space lost to sediment (approximately 54,000 AF), would injure their water rights, much of the year was spent in preparation for a hearing on this petition. By end of the water year, work had progressed toward a settlement whereby the protestors withdrew their complaint in return for additional protective language agreed to by the petitioner. The BOC approved the petition (although that action actually occurred in November 2008, which is beyond the 2008 WY timeframe for this report) and work proceeded on writing a report to the legislature by which the "export" of this water for Program purposes could be legislatively authorized.

In 2008, I was elected Chairman of both the Colorado River Basin Salinity Control Forum and the associated Advisory Council (a FACA entity). This program continues to do good work reducing salinity in the Colorado River Basin, but faces issues with federal funding. Bureau of

reclamation salinity dollars are declining, although funding under the Department of Agriculture's EQIP program appears healthy. An issue faced by that group is obtaining statutory clarity in federal law for operating the "parallel program" whereby basin funds can be expended as up-front cost sharing for salinity control purposes. In the 2008 Farm Bill, this language was in fact clarified, although implementation of the new "Basin States Program," as it has been renamed, still awaits the preparation and acceptance of a statutorily-required report to Congress.

Other interstate issues, including the ones above to some extent, are described further in that section of this annual report.

Summary

As usual, I wish to report that it has been a pleasure working with the capable and professional staff of this agency. 2008 saw a year of plentiful runoff in most places, and reservoirs on many of our major rivers and their tributaries filled. The economy is uncertain nationwide, and the effects of reduced prices for the minerals like natural gas are predicted to soon affect funding available for Wyoming State Government. In that respect, 2009 will be a year of potentially great change in Wyoming's fiscal posture which could ultimately, and negatively, affect the 2010 biennial budget.

ADMINISTRATION DIVISION

Harry C. LaBonde, P.E.
Deputy State Engineer

General

The Administration Division is responsible for three separate functions in support of this agency. They include fiscal operations, human resources/personnel management, and support staff for the State Engineer. This group is also responsible for special agency projects such as the Biennium Budget, Annual Report, Strategic Planning, IT Initiative and the Agency's Health and Safety Program.

Fiscal Operations

A total of three employees work in this section and are supervised by Steve Winders. Mr. Winders was responsible for coordinating the agency's 2009-2010 biennium budget proposal which was submitted to the governor on August 31, 2007. The budget proposal totaled $33,595,655.00 of which $27,860,613.00 was considered to be standard budget. After review by the Governor, the budget request was trimmed to $31,987,254.00. In February 2008 the Legislature began consideration of the Governor's proposed budget and ultimately approved the agency's 2009-2010 biennium budget for $31,996,155.00. As stated in the State Engineer's section of this report, the entire budget process was considered a success with several large exception requests approved.

Human Resources/Personnel Management

Loretta Branigan's employment began on December 10, 2007 as the agency's new Human Resource Officer. Ms. Branigan brings a wealth of both private and public sector experience to the agency and was most recently employed by the Wyoming Department of Administration and Information. Her HR knowledge and experience was invaluable to the agency as the state moved forward with its Classification and Compensation study for all state employers.

IT Initiative

The IT Initiative consists of four major components that are being developed by Weston Solutions of Seattle, Washington. The project had originally been scheduled for completion in November of 2006. However, due to the complexity of the agency's water right processes and the poor condition of the agency's existing water rights databases, the project has been delayed. In September 2008, the Ground Water Division began utilizing the production model of e-Permit to process new applications. Once the ground water portion of e-Permit is thoroughly tested, it will be made available to the public. The completion of the Surface Water and Board of Control modules are lagging behind Ground Water and will be completed in 2009.

INTERSTATE STREAMS DIVISION

By

Sue Lowry
Division Administrator
and

John W. Shields	Matt Hoobler	Jodee Pring	Steve Wolff
Interstate Streams Engineer	North Platte Coordinator	Water Planning Coordinator	Colorado River Coordinator

The State Engineer is charged with administering and overseeing all matters involving Wyoming's interstate and intrastate streams and rivers. A primary objective of the agency is to safeguard the State's current and future water supplies by preserving Wyoming's ability to use and develop our water allocations under our interstate compacts and court decrees. Wyoming is party to seven interstate river compacts, and court decrees are the basis for water administration functions in several river basins. The Interstate Streams Division provides technical and policy support for water allocation and administration issues associated with these governing compacts and decrees. The Water Planning and Water Conservation activities of the agency are also coordinated in this Division.

INTERSTATE STREAMS ACTIVITIES

The following summarizes notable activities of the Interstate Stream Section by river basin or issue:

Missouri River Basin

The Missouri River Association of States and Tribes (MoRAST) is made up of 7 of the Missouri River basin states (the state of Missouri declined to participate) and individual tribes are eligible for membership. Each state is represented by the state water resources agency as well as the game and fish management agency, except Wyoming as our Game and Fish Department declined to participate at this time. Tribal participation greatly expanded during this reporting period. Initial MoRAST by-laws provided for 6 voting seats for the 28 basin tribes. The tribes felt that their representation should be more equal to that of the states, so in August, 2008, the MoRAST board agreed to expand the eligible number of voting tribes to 13, and amount equal to the number of state representatives. Substantive work of the organization has focused around the Corps of Engineers and their Annual Operating Plan for the Missouri mainstem, and requesting that a study be completed on the contemporary value of the Flood Control Act of 1944.

Missouri River Recovery Implementation Committee (MRRIC)

The 2003 Biological Opinion from the Fish and Wildlife Service which outlined the Reasonable and Prudent alternatives during the Master Manual update outlined the need for a public stakeholder group to be formed to serve in an advisory capacity to the Fish and Wildlife Service and to the Corps of Engineers as they moved forward with the Biological Opinion projects. The Water Resources Development Act of 2007 defined and authorized the MRRIC. A broad

stakeholder group developed the guidelines for the MRRIC and the final recommended MRRIC charter was presented to the Army Corps of Engineers Secretary of the Army May 0f 2008. Sue Lowry and Jodee Pring serve as Wyoming's representative and alternate to the MRRIC. The inaugural meeting of the group was held on September 29-October 1, 2008. A presentation on Wyoming's involvement was made to the Water Development Commission at their June, 2008 meeting as there was interest from the Commission on perhaps having additional representatives on MRRIC.

Missouri River Ecosystem Restoration Plan (MRERP)

A parallel process for prescribing the long-term restoration activities in the Missouri River basin was also authorized in the Water Resources Development Act (WRDA) of 2007. Wyoming was requested by the Corps of Engineers to be a cooperating agency in the development of the Environmental Impact Statement and Ecosystem Plan for the Missouri River. Representatives from the Corps and US Fish and Wildlife Service attended the May, 2008 Board of Control meeting and briefed Wyoming on the proposed plan. As the WRDA language defines that tributaries may also be included in the long-term plan, Wyoming agreed to join as a cooperating agency, at least initially as the plan is scoped.

Platte River Basin

North Platte Settlement Agreement

The U.S. Supreme Court approved the Final Settlement Stipulation and entered the Modified North Platte Decree in Nebraska v. Wyoming on November 13, 2001. The goal of the settlement was protection of existing water rights while providing certainty about the extent of Wyoming's water use and future water development and management. In general, the settlement calls for an increase in monitoring, measurement, accounting, and reporting of water use, as well as future studies to be conducted by the North Platte Decree Committee (NPDC).

The NPDC consists of water officials from the Bureau of Reclamation, Wyoming, Nebraska, and Colorado. The NPDC was created to reestablish trust and cooperation on various issues and to assist the parties in resolving future disputes. The NPDC members will attempt to resolve any disputes through direct negotiations or, as a last resort, through alternative dispute resolution, before returning to Court. NPDC meets in the fall and spring every year. Mr. John Lawson with Reclamation is the Chair of the NPDC as of January 1, 2008. The NPDC has formed several subcommittees to assist in fulfilling its duties under the Modified Decree: Ground Water Wells, By-Laws, Control Crest, Official Files, Finance, Consumptive Use, Replacement Water, and State Line Gage Study.

Wyoming performs the following tasks to comply with the North Platte Settlement Agreement and as a cooperating member of the NPDC:

1. Wyoming serves on the NPDC Consumptive Use Subcommittee which conducts consumptive use research in the basin upstream of Guernsey Reservoir as required under the Modified North Platte Decree. During 2008 the High Plains Regional Climate Center (HPRCC) in Lincoln, Nebraska, under a contract with the NPDC relocated one weather station from Torrington to the new University of Wyoming experimental farm in Lingle. During 2008, the Consumptive Use Subcommittee drafted and released an RFP to acquire professional services to estimate consumptive use of irrigated lands from satellite imagery

over one growing season. The NPDC approved the hiring of Riverside Technology, Inc. to conduct the Consumptive Use analysis.

2. Wyoming continues to track and report daily accounting for the Whalen Diversion Dam to the State Line reach. A new radio telemetry system was installed in 2004 at mainstem diversions below Whalen to improve data collection and accuracy. In 2006 Wyoming added six tributary diversion locations to the existing mainstem telemetry system. As a recommendation from the Stateline Gage Subcommittee, the NPDC approved the hiring of Aqua Engineering to evaluate three measurement sites near the Nebraska-Wyoming state line. The results of this evaluation will be available in 2009.

3. Wyoming replaces the depletions of the river's natural flow during "Trigger Days" caused by active groundwater wells pumping for irrigation in the triangle area. Wyoming had to replace 6,198 acre feet of water for each of the 254 wells reported as active in the 2007 irrigation season. Prior to the April 2008 NPDC meeting, Wyoming reported an estimated 50,606 acre feet was pumped for irrigation purposes by active irrigation wells in the triangle area during the 2007 irrigation season. Water Year 2008 was the fifth year Wyoming had to measure and provide replacement water for out-of-priority depletions on tributaries within the triangle area. Wyoming ordered the release of 203 acre feet of water for out-of-priority tributary obligations in Water Year 2008 and replaced a 62 acre feet obligation which was carried over from Water Year 2007.

4. For the 2007 irrigation season, Wyoming reported in a February 29, 2008 letter to the NPDC, that the intentionally irrigated acreage for the North Platte River basin above Guernsey Reservoir, exclusive of the Kendrick Project, was 193,266 acres and in the Lower Laramie River basin, exclusive of the Wheatland Irrigation District, was 23,318 acres. In accordance with the Settlement Agreement, the intentionally irrigated acreage caps for these basin areas are 226,000 acres and 39,000 acres, respectively.

5. For the 2007 irrigation season, Wyoming reported in an April 30, 2008 letter to the NPDC that the ten year calculated consumptive use of irrigation water in the North Platte basin upstream of Pathfinder Dam was 1,080,000 acre feet for 1998 through 2007. In addition, Wyoming reported the ten year calculated total was 810,000 acre feet for the North Platte basin between Guernsey Reservoir and Pathfinder Dam.

6. From 2005 to 2008, Wyoming installed measuring devices and electronic monitoring equipment to track annual accruals at the eleven largest irrigation reservoirs storing water upstream of Pathfinder Reservoir. Work continues on the construction of inflow and outflow structures to provide accurate measurements. During 2009, the State Engineer's Office will be transferring the ownership of the measuring devices and associated buildings to the reservoir owners.

Seven (7) full-time field staff and two (2) Cheyenne staff within the State Engineer's office carry out the tracking and reporting requirements of the Settlement Agreement. Many existing staff positions continue to be faced with additional responsibilities to comply with the Settlement Agreement. By accurately tracking and reporting Wyoming's water use in the North Platte River Basin, the State of Wyoming is able to protect Wyoming's appropriation of this valuable water resource.

Platte River Recovery Implementation Program (PRRIP)

In 1997, the States of Colorado, Wyoming and Nebraska and the U.S. Department of the Interior (DOI) signed the Cooperative Agreement (Agreement) for Platte River Research and Other Efforts Relating to Endangered Species Habitat along the Platte River in Central Nebraska. The Agreement addressed recovery of four species: the whooping crane, piping plover, least tern, and pallid sturgeon. The DOI contracted with the National Academy of Sciences (NAS) to review and evaluate the science regarding the central Platte River habitat needs and flow recommendations. The NAS report was released on April 28, 2004. The final environmental impact statement (EIS) and the biological opinion were distributed on May 18 and June 20 in 2006; respectively. Secretary Kempthorne of the DOI signed the Record of Decision on September 27, 2006.

The PRRIP agreement was signed by the Governors of Colorado, Nebraska, and Wyoming and the Secretary of Interior in late 2006. The PRRIP will remain in effect for the first increment, 13 years, unless terminated earlier by one of the signatory parties. Mr. Mike Purcell, Director, Wyoming Water Development Commission, represents Wyoming on the Governance Committee (GC) and currently serves as the Chair. The State Engineer serves as an alternate to Mr. Purcell on the Governance Committee. Deputy State Engineer, Harry LaBonde, attends GC meetings for the State Engineer. Meetings are currently being held on a quarterly basis. The program establishes key standing advisory committees to assist the GC in implementing the program. Those committees include the Technical Advisory Committee, the Land Advisory Committee, the Water Advisory Committee and the Finance Committee. In addition, an Adaptive Management Working Group has been formed to inform the GC on implementation of the program's adaptive management plan.

The PRRIP which began on January 1, 2007 is estimated to cost $317 million, with the federal share being $158 million (2005 dollars). Wyoming's 2006 Legislature approved $6 million in funding for the PRRIP and $8.5 million for an action alternative, the Pathfinder Modification Project (PMP), to recover 54,000 acre-feet of space in Pathfinder Reservoir. The PMP provides a municipal water supply, a water supply to help meet obligations of Wyoming under the Modified North Platte Decree, and enhancement of regulatory certainty under ESA.

PRRIP addresses several Endangered Species Act (ESA) issues affecting water development in the Platte River Basin in Wyoming. In the absence of the PRRIP, each water project or activity in the Platte River Basin having a federal nexus will be required to address and comply with federal ESA regulations individually, a process that could be costly and inefficient and would severely impact the states and their water users.

Wyoming's Water Depletion Plan addresses Wyoming's responsibilities for existing and new water depletions in the Platte River Basin. Individual water users do not need to independently seek the federal clearances required under the ESA because the Program serves as the reasonable and prudent alternative for existing water related activities and certain new water related activities implemented after July 1, 1997.

Wyoming's Coordinator of Wyoming's Depletions Plan within the State Engineer's Office is tasked with preparing annual reports to satisfy the requirements of the Depletions Plan and performing Federal and state consultations on new water related projects. The Depletions Plan requires Wyoming to extensively track and report municipal, industrial, rural domestic,

agricultural water uses, and various new water uses implemented since July 1, 1997. The first report addressed the new water uses and compares Water Year 2007 water uses to the 1997 baselines. Annual Reports of any new water-related projects will be submitted to the GC by March 15, 2009.

More information regarding the status of the Platte River Cooperative Agreement is available at the following website: http://platteriverprogram.org/

Laramie River Basin

After initial meetings last reporting period between Wyoming and Colorado to review the provisions of the decree, Colorado has continued to provide us with year-end delivery numbers for the Laramie River. No meetings were held during this reporting period with Colorado.

Yellowstone River Basin

On January 31, 2007, Montana filed a Motion for Leave to File Bill of Complaint with the US Supreme Court making the claim that Wyoming has violated the Yellowstone Compact by expanding our water use in the Tongue and Powder River basins, by allowing groundwater pumping associated with coalbed methane development, and by constructing additional storage. Wyoming submitted a Motion to Dismiss in April, 2008. Barton H. Thompson, Jr. has been named as the Special Master to the case.

Although this threat of litigation is in the background, the Compact Commission continued to hold its Technical and full Commission meetings on December 5-6, 2007 and April 16-17, 2008. At the April meeting, the Commission agreed to hold a full commission meeting in the early winter and a Technical meeting only in April or May of each year.

Federal legislation to authorize and fund the negotiated Crow Compact settlement was introduced by Montana Senators in July, 2008. The Senate Committee on Indian Affairs held a hearing on the proposed legislation in September and Senator Barrasso's staff worked with the State Engineer's Office and the Attorney General's office to see if acceptable language could be forged. The Chairman of the Senate Indian Affairs has agreed to not move the bill until Montana and Wyoming have agreed on amendments.

State Engineer Tyrrell sent a letter to Secretary Kempthorne in August, 2008 requesting the Bureau of Indian Affairs again fund the critical streamflow and diversion gages related to Wind River Indian Reservation water administration.

Yellowtail/Bighorn Reservoir Long Range Planning Group

The Long Term Issues group formed by Reclamation to bring interested parties together to discuss Yellowtail Reservoir operations continued to meet about every other month. Reclamation has slowly brought more current year, annual operating plan, type information to the group for discussion and input. Spring 2008 operations were extreme. The late, cool spring kept inflows into Yellowtail low, resulting in releases below the dam at levels less than those desired by Montana Fish, Game and Parks. But once the snow pack melt began the reservoir level came up very quickly, necessitating higher than average releases in early June. Carryover

amounts into water year 2009 are high and winter releases are planned to be near 2500 cfs. Three main issues are under review by the Long Term Issues Group:

Could the exclusive Flood Control Space elevation be changed?
Management options for the sediment deposition in the Horseshoe Bend area
Are there man-made habitat enhancements that could be applied below the dam to offset down cutting?

Belle Fourche River Basin

The annual coordination meeting between Wyoming, South Dakota, Reclamation, US Geological Survey and the water users was held on December 18, 2007 in Belle Fourche, South Dakota. This once-a-year meeting provides a good forum for the irrigators and the state water administrators to discuss the previous year's deliveries and discuss operations for the following year. Keyhole Reservoir storage made some gains in the spring-early summer of 2008 as timely rainfall was received. Belle Fourche Irrigation District in South Dakota has received funding through the Water 2025 program and has used these funds to line several miles of their canal/lateral system, which has decreased their need for storage water from Keyhole Reservoir. In April, 2008 a meeting was held with State Engineer's Office staff from Sheridan and this division and the Crook County Irrigation District board of directors. CCID felt that the state was inappropriately interpreting the compact and that they should have greater flexibility in how they utilize water under Article V of the Compact. The 10-90% split described in the Compact was reviewed with South Dakota in May, 2008 but it is difficult to put many resources into pursuing this topic when the water usage by the CCID out of Keyhole Reservoir remains low.

Niobrara River Basin

The State of Nebraska has been accessing Wyoming water rights via the SEO website and has called with some clarifying questions over the past couple of years. Nebraska state officials had also been suggesting that a Compact meeting should be held between the two states for some period of time. Such a meeting was held September 22, 2008. At the meeting, Nebraska stated that some of their constituents have been raising some Compact concerns, and later that same week a lawsuit was filed against the State of Nebraska by these water users stating that Nebraska had not been vigilant under the terms of the Compact in protecting their interest.

Colorado River Basin (Green River and Little Snake River Basins)

The overall precipitation in the Colorado River Basin during water year 2008 was near average (101% of average). The unregulated inflow to Lake Powell during the April through July 2008 was 8.906 maf (112% of average). The Upper Colorado River Basin is experiencing a protracted multi-year drought. Since 1999, inflow to Lake Powell has been below average in each of the years except water year 2005 and 2008. In the summer of 1999, Lake Powell was essentially full with reservoir storage at 23.5 million acre-feet, or 97 percent of capacity. Inflow to Lake Powell in 1999 was 109 percent of average. A five-year period of extreme drought occurred in water years 2000, 2001, 2002, 2003, and 2004 with unregulated inflow to Lake Powell only 62, 59, 25, 51, and 49 percent of average, respectively. Lake Powell storage continued to decline during these very low-flow years, reaching a low reservoir content of 8.0 million acre-feet (33 percent of capacity) on April 8, 2005.

Drought conditions eased in water year 2005 in the Upper Colorado River Basin. Precipitation was above average in 2005 and unregulated inflow to Lake Powell was 105 percent of average. Lake Powell increased by 2.77 million acre-feet (31 feet in elevation) during water year 2005. But as is often the case, one favorable year does not necessarily end a protracted drought. In 2006, there was a return to drier conditions in the Colorado River Basin. Unregulated inflow to Lake Powell in water year 2006 was only 71 percent of average.

The following table summarizes Colorado River Basin conditions during the past ten years:

Upper Colorado River Basin Inflow and Principal Reservoir Storage

Water Year	Unregulated Inflow into Lake Powell % of Average	Combined Lakes Powell and Mead Storage in maf	Lakes Powell & Mead Storage as % of Capacity
1999	109	47.59	95
2000	62	43.38	86
2001	59	39.01	78
2002	25	31.56	63
2003	52	27.73	55
2004	49	23.11	46
2005	104	27.24	54
2006	72	25.80	51
2007	68	24.43	49
2008	107	27.04	54

Over the past 9 years (2000 through 2008, inclusive), inflow to Lake Powell has been below the 30-year (1970-2000) average in all but two years (2005 and 2008). Drought conditions eased in water year 2008 with above average inflows to the main stem Colorado River reservoirs (with the exception of Flaming Gorge and Fontenelle Reservoirs). Reservoir storage in the Colorado River Basin is still much below desired levels.

Upper Colorado River Commission Activities and Seven Basin States' Negotiations

The onset and continuation of severe drought conditions in the earlier years of this decade as explained immediately above – has led to discussion – and action – to develop procedures for administering a water use curtailment action, should one become ever necessary. On April 8, 2005, Lake Powell's active storage declined to 8 million acre-feet of water – a water level not seen since 1969 when the reservoir was initially filling. As the chief water official responsible for water administration in Wyoming, the State Engineer – and his colleagues in the Upper

Colorado River Division states are appropriately addressing the "what if" question of what if Lake Powell's storage level continues to decline and it would become necessary to curtail uses in order to comply with the terms of the Colorado River Compact. At that time, the State Engineer, as Wyoming's Commissioner to the Upper Colorado River Commission, and the other Commissioners, initiated discussions to begin developing procedures and methodology to administer and implement Article IV of the 1948 Compact. Article IV provides for determining the amount of water Wyoming and its sister states of the Upper Division have to provide in the event of "curtailment of the use of water by the States of the Upper Division at any time … become[s] necessary in order that the flow at Lee Ferry shall not be depleted below that required by Article III of the Colorado River Compact." Specifically, the Upper Division States' would have to reduce their water consumption if the ten-year running average flow past the Compact point (Lee Ferry, AZ) was to fall below 75 million acre-feet of water.

The Upper Colorado River Commission and the Members of its Engineering Committee have cooperatively worked to develop policy and technical alternatives pertaining to quantification of annual water uses in the Upper Colorado River Basin and how curtailment of water use would be administered. These important matters are being addressed in both synoptic and detailed draft documents – recognizing that consensus on major conceptual and policy elements is required before progressing to the point of developing mechanistic procedures. In September, the State Engineer, Alternate Commissioners and their engineering and legal advisors and others conducted an internal Wyoming group meeting concerning prospective water use curtailment administration policy and procedures (including definitions, terms and mechanisms) here in Wyoming. Generally, all of the Upper Division States' Commissioners are "on the same page" with regard to the fundamental concepts concerning an event that we hope does not happen in the foreseeable future, but which we need to be prepared to effectively deal with should the need arise. There has never been, and hopefully will never be, a curtailment in the Upper Basin States as outlined in the Upper Colorado River Compact; however, given the ongoing drought and continuing low storage levels in Lake Powell, Wyoming and our sister states need to be ready, with all procedures worked out in advance, to annually and with defensible accuracy, estimate consumptive water use in the Upper Colorado River Basin. While much work remains to be done, failure to be ready to administer the Compact would not be in the best interests of Wyoming's water users.

Interim Shortage Guidelines and Coordinated Reservoir Operations

The Record of Decision for Colorado River Lower Basin Shortage Guidelines and Coordinated Management Strategies for the Operation of Lake Powell and Lake Mead by was signed by Secretary of the Interior Dirk Kempthorne on December 13, 2007 in Las Vegas, Nevada.

Calendar year 2008 was the first year of operations under the Colorado River Lower Basin Shortage Guidelines and Coordinated Management Strategies for the Operations of Lake Powell and Lake Mead. The Record of Decision implementing these interim operational guidelines that will be in place through 2026 was signed by Secretary of the Interior Kempthorne on December 13, 2007 at the annual conference of the Colorado River Water Users

Association. The Secretary requested each of the Governors' Representatives for Colorado River Operations join him on the stage during the signing ceremony (see photograph herewith).

The Guidelines specify the elevations in Lake Mead which dictate during the interim period when the Secretary will declare water use shortages in the Lower Basin and what the amount of those shortages will be. The Guidelines also specify new, coordinated operational parameters for Lakes Powell and Mead, which have as their intent to operate the reservoirs to avoid the risk of water curtailments in the Upper Basin and minimize shortages in the Lower Basin. The guidelines provide mechanisms for the creation and delivery of conserved system and non-system water in Lake Mead (Intentionally Created Surplus [ICS]) to create additional water supply flexibility in the Lower Basin, encourage water conservation in Lake Mead and severity of potential future shortages. In addition, the Guidelines modified and extended the existing Interim Surplus Guidelines, through 2026. In a separate, cooperative process, the Bureau of Reclamation is working through the U.S. State Department to consult with the Republic of Mexico regarding potential water delivery reductions to Mexico under the 1944 Treaty with the United States.

The coordinated reservoir operational guidelines now in place tie releases from Lake Powell to ranges of reservoir storage elevation levels, or tiers. While managing the two large reservoirs conjunctively as a system will provide water supply benefits and improve certainty, it is readily apparent, after gaining a year's worth of operational experience, that what used to be strictly Lower Basin decisions and actions that affected Lower Basin storage exclusively can now directly affect the water volume that must be released from Lake Powell under the operational guidelines. The Basin States, through their Basin States Technical Committee, are set to engage in discussions in early 2009 about how to improve communication and coordination so that the Upper Basin is appropriately involved in operational decisions and issues which affect Lake Powell releases.

There are several administrative issues relating to reservoir equalization (e.g., releases to more nearly equalize the storage content in Lake Mead and Lake Powell pursuant to the Coordinated Long Range Operating Criteria provisions) which are under review and which may need to be modified to assure fairness to the Upper Basin. In addition, a point of discussion continues to be making certain there is no manipulation of releases from Lake Mead for the purpose of increasing the equalization water releases from Lake Powell. One of the ironies of the current operations is that in years which require equalization the actual amount of extra release (beyond the minimum objective release amount of 8,230,000 acre-feet) from Lake Powell will also be impacted by tributary inflow between Powell and Mead. Reclamation's 24-month study computational modeling currently simply assumes the average historical inflow (the Basin States' will be examining this matter as well). If inflows are less than average, the Upper Basin will be required to make up the difference with additional releases from Lake Powell (assuming demands are constant) to meet the 1105 foot elevation level threshold in Lake Mead.

Colorado River Basin Salinity Control Program

The Interstate Streams Division of the State Engineer's Office continues to actively participate in the activities of the Colorado River Basin Salinity Control Forum, the Forum's Work Group and the Colorado River Basin Salinity Control Advisory Council (established as a Federal Advisory Committee Act committee by the 1974 Salinity Control Act). In addition, the Division continues its longstanding efforts associated with reducing salt loading into the Green River's tributaries at

the Big Sandy Unit of the Colorado River Salinity Control Project (contiguous with the boundaries of the Eden Valley Irrigation and Drainage District, which includes the communities of Eden and Farson).

This reporting year was the tenth year of the "parallel" salinity control program authorized by the 1996 Farm Bill (P.L. 104-127) amendments to the Colorado River Basin Salinity Control Act (CRBSCA). The 1996 Farm Bill amendments to the CRBSCA allow up-front cost-sharing for salinity control measures (as opposed to reimbursement from the Upper and Lower Colorado River Basin Development Funds to the Federal Treasury once expenditures had occurred in a preceding year). The Parallel Program has allowed significant leveraging of federal appropriations with Basin Fund monies, and directly accelerated the rate of salinity control efforts being implemented across the Basin. Unfortunately, solicitors' advising the Bureau of Reclamation's Salinity Control Coordinator raised questions during the past reporting period about the authority found in the Salinity Control Act to allow for this Basin States Parallel Program. This, along with questions about administration of the Bureau of Reclamation's Basinwide Salinity Control Program, led the Bureau to initiate a "program review" in mid-2007 that was completed during the first quarter of calendar year 2008.

In order to avoid further debate and authority issues arising, the Salinity Control Forum sought explicit legislative authorization for the Parallel Program. This was accomplished through the enactment into law in May 2008 of Section 2806 of the Food, Conservation and Energy Act of 2008 (PL 110-234) creating the Basin States Program expressly authorizing salinity control practices using Basin Funds. Section 2806 provides explicit authorization for the Basin States Program to be conducted and requires a planning report describing the proposed administration of the Basin States Program be transmitted by the Secretary of the Interior to the appropriate Committees of Congress. The Secretary may not expend funds to implement the Basin States Program before the expiration of the 30-day period beginning on the date on which the Secretary submits the report to the Congress. Accordingly, the Colorado River Basin Salinity Control Advisory Council established an ad-hoc subcommittee to draft a recommended draft report for consideration by the Secretary. The ad-hoc subcommittee's members, the Advisory Council and Bureau of Reclamation officials worked together to craft report language. Reclamation has forwarded the draft report to its Washington DC offices to initiate the surnaming process that will ultimately result in the Secretary's transmittal of the report.

The newly-authorized Program contains a directive that the Secretary of the Interior shall consult with the Colorado River Basin Salinity Control Advisory Council in carrying out the Program's measures and associated works. This will provide additional involvement and a greater role for the Advisory Council in making funding decisions about projects to reduce salinity from saline springs, leaking wells, irrigation sources, industrial sources, soil erosion on public and private land; and operation and maintenance of salinity control features; and studies, planning, and administration of salinity control activities.

As reported in prior years' annual reports, the Eden Valley Irrigation and Drainage District (EVIDD) proposed in 2006 to replace several long laterals traversing very sandy ground with pipelines as a means to accomplish additional salinity control beyond the extensive irrigation water management and salt-reduction successes obtained through installing over 80 center pivot sprinklers in the Valley. The lateral piping proposal made by EVIID to the Bureau of Reclamation offered very cost-effective (~$22 per ton of salt removed; amortized, Federal cost) salinity control. Working with their Legislative representatives and the Wyoming Water Development Commission, EVIDD

was successful in obtaining $1.588 million of non-federal cost-sharing funds for this water management/salinity control project from the 2005 Wyoming Legislature. As was previously reported herein, the Colorado River Basin Salinity Control Forum recommended and the Bureau of Reclamation approved use of Parallel Program salinity control funds for the remaining 50% of the funding. A total of 11.2 miles of pipeline were proposed to replace the three open-channel canal laterals pursuant to this proposal.

During 2006, the State Engineer's Office negotiated cooperative agreement amendment with Reclamation to allow the SEO to serve as the financial agent to transfer the "parallel" program funds to the EVIDD as contractor bills are submitted; and a project funding agreement between the SEO and the EVIDD specific to handling the Parallel Program funding - and providing for approval of all work performed by engineers at the Water Development Commission. The EVIDD hired Nelson Engineering to provide engineering services for this project in 2006. Engineering design and detailed cost estimation work was performed by the Pinedale office of the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) in 2007. Due to ongoing plastic pipe price escalation and issues associated with the pipeline capacity the cost estimates came in over the available funding to complete the project and the NRCS went "back to the drawing board" in the late summer of 2007. Revised cost estimates that reflected smaller pipeline capacity were delivered to the Water Development Commission in early November 2007.

The newly-constructed E-19 Lateral Intake Structure, completed in May 2008, allows water to be delivered from the Main Canal of the Eden Valley Irrigation and Drainage District into the new E-19 lateral pipeline that has replaced miles of open canal.

A bid announcement was made, finally, on December 13, 2007 and bids were opened in early February, 2008. The EVIDD hired Johansen Construction, Inc. (JCI) of Mt. Pleasant, Utah to perform construction work with a total value of approximately $2.4 million. JCI started work on April 14th and completed the installation of about 20,000 linear feet of pipe and one diversion structure prior to water turn-in on May 15. Thereafter, JCI initiated and completed the wildlife habitat mitigation ponds features of the Project. Once irrigation ceased, JCI moved back onto site and made tremendous progress on laying additional pipe, using three pipe-laying crews. As of this date, nearly all pipeline installation has been completed; the project is more than 90 percent complete and the remainder will be finished in the Spring of 2009.

Upper Colorado River Endangered Fish Recovery Program

On April 21, 2008, Secretary Dirk Kempthorne of the U.S. Department of the Interior awarded Cooperative Conservation Awards (CCA) to partners involved in 22 projects across the Nation. The Upper Colorado River Endangered Fish Recovery Program, and its sister effort, the San Juan River

Basin Recovery Implementation Program, were recipients of this prestigious national award. The CCA is Interior's highest award presented to recognize significant contributions and outstanding collaboration efforts among federal and non-federal entities who are accomplishing on-the-ground conservation achievements. "These outstanding partnerships and cooperative efforts represent a fundamental way in which our Department provides stewardship for America with integrity and excellence," Secretary Kempthorne said. "They embody a broad spectrum of conservation work from restoring wetlands, rangelands and mine lands to protecting wildlife, conserving water and fighting invasive species to teaching conservation values to the next generation." An image of the award certificate presented to the Wyoming State Engineer's Office, as a Recovery Program partner, by Secretary Kempthorne, is herewith.


U.S. Department of the Interior
COOPERATIVE CONSERVATION AWARD
In recognition of outstanding conservation achievements attained through collaboration and partnership with others
Upper Colorado River Endangered Fish Recovery Program
Wyoming State Engineer's Office
is hereby awarded this certificate in the year 2008
Secretary of the Interior

The State Engineer's Office was recognized by Secretary of the Interior Kempthorne at a ceremony in Washington D.C. on Earth Day, 2008, for our long-time partnership on the Upper Colorado River Endangered Fish Recovery Program.

On April 22nd and 23rd, the CCA winners, stakeholders, and DOI agencies' staff – about 100 individuals in all – met to share their approaches for successful conservation partnerships and to generate ideas for future conservation initiatives and collaborative opportunities. The CCA Workshop was organized around themes and challenges for cooperative conservation projects. Participants from each project provided an overview of the key accomplishments of their projects or programs. As the representative of the two recovery programs chosen to make the formal presentation at the CCA Workshop, the Wyoming Interstate Streams Engineer offered the following as principles that have helped frame our recovery programs' approaches for achieving the successes that we have had over the past twenty years:

- Committed partnership efforts do not succeed and remain viable over time unless each of the partners share a **common unified vision** of the collectively-sought, mutually-agreeable outcome.
- The two recovery programs were created with an **adaptive management approach.** Sound science builds trust. Recognizing the need to make mid-course corrections and implementing needed changes in a timely manner maintains trust.
- It's **not enough** to appropriately use sound **biological and physical science** in recovering endangered species; our programs realized it is **absolutely essential to** meaningfully **incorporate political science as well**.
- True partnership efforts – those that afford appropriate levels of participant involvement, input, decision-making and joint accountability – MUST be founded upon and employ a **workable set of checks and balances.**

- Every sustainable organization must have workable and practical means to govern their bureaucratic processes, that is, accomplish their "governance." While that government must be limited to its proper ends, its means must be capable of affecting those ends.
    - There is **room for compromise – indeed, demand for it -- in a system founded on checks and balances.**
    - Accordingly, our programs' governance systems are grounded upon and **recognize fundamental human nature** as well as the **wide-ranging diversity of our participants' views and values**.

The past year required considerable attention and work on Recovery program-related budgetary and legislative initiatives, however, only mixed results were obtained. After multiple efforts through many channels, the non-federal Program participants were very pleased to read in the President's recommended Fiscal Year 2009 budget for the Upper Colorado Region of the Bureau of Reclamation that an increase -- of over $3 million -- had been provided, over the 2008 level, in the line-item that provides funds for the Recovery Program and the San Juan program. Getting funding into the Bureau's budget to pay the slightly over $6 million debt the Recovery Program owed to the Colorado River Water Conservation District as the remainder of the Program's share of the costs of enlarging Elkhead Reservoir was a very large accomplishment. The annual briefing trip to inform the participating states' Congressional Delegation members' staff, authorizing and appropriation Congressional committee staff members and Department of the Interior agency officials about the current status and funding needs of the Upper Colorado and San Juan recovery programs was conducted in early March, 2008. The group representing the two recovery programs held 35 meetings during the trip, met personally with Senator John Barrasso, and once again demonstrated that we have exceedingly strong bipartisan support for our ongoing recovery program efforts and for the Bureau of Reclamation and the Fish and Wildlife Service funding required to conduct the recovery programs.

Public Law 106-392 specified that the Secretary of the Interior will submit a report to the House Natural Resources and Senate Energy and Natural Resources Committees before the end of fiscal year 2008 on the utilization of power revenues for annual base funding to the Congress with recommendations on the need for continued annual base funding from power revenues beyond fiscal year 2011. All Recovery Program partners agree that continuing the use of Upper Colorado River Basin Fund monies for annual base funding purposes is necessary. These CRSP power revenues contribute significantly to the successful implementation of both recovery programs; however, reauthorization by Congress is required. Without its action, the use of power revenues for annual base funding of recovery program actions will decrease by 39% after fiscal year 2011 and critical activities would be eliminated – thus delaying and likely preventing attainment of the fish species' recovery goals, which is the means by which recovery of the species will be achieved.

On June 25, 2008, Senator Bingaman introduced a bill to amend the Recovery Programs' capital funding and annual base funding authorizations. A hearing on the measure was promptly held on July 8, 2008 by the Water and Power Subcommittee of the U.S. Senate Energy and Natural Resources Committee. A House companion bill (H.R. 7169) was introduced by Representative Tom Udall on September 26, 2008. Legislation will be introduced during the upcoming

Congressman John Salazar kids Deputy Secretary of the Interior Lynn Scarlett during his remarks at the July 1st Grand Valley Capital Projects Completion Ceremony on the Colorado River outside of Grand Junction, Colorado.

111th Congress of the United States.

The Upper Colorado River Endangered Fish Recovery Program held a dedication ceremony on July 1, 2008 at the Price-Stubb Diversion Dam fish passage facility to celebrate the completion of our capital construction facilities in the Grand Valley of Colorado. The ceremony was attended by about 100 people and included an optional tour of several of the constructed and operating projects (Redlands screen and fish passage) that are benefitting the endangered fish species and providing Endangered Species Act compliance for Federal, state and private water projects in the Grand Valley. The speakers were U.S. Congressman John Salazar, Deputy Secretary of the Interior Lynn Scarlett, Deputy Commissioner of Reclamation Kris Polly, Colorado Water Conservation Board Director Jennifer Gimbel and USFWS Deputy Regional Director Jay Slack. As Chairman of the Management Committee, the Interstate Streams Engineer had the distinct privilege of serving as the Master of Ceremonies at this dedication event. We got wonderful press in the Grand Junction *Sentinel* about the Recovery Program's efforts in the Grand Valley.

Colorado River Management (AOP) Work Group

The final consultation meeting for the development and recommendation of the Water Year 2009 Annual Operating Plan for the Colorado River Reservoir System was held in Las Vegas, Nevada on October 24, 2008. During the meeting there were only a couple of minor comments offered to Reclamation. The AOP will now be forwarded to the Washington office of the Bureau of Reclamation for their presentation to the Secretary of the Interior for his approval and transmittal to the Governors of the seven Colorado River Basin States. This is the first AOP that is entirely based on the Interim Shortage Guidelines and Coordinated Reservoir Operations that were implemented by the Secretary's adoption of the Record of Decision for the ISG/CRO on December 13th of last year (which was followed by additional consultation with the States and its amendment in January 2008).

The final 2009 AOP provides for:

- Glen Canyon Dam being operated in the Upper Balancing Tier with a release of 8.23 maf, unless the April 2009, 24-Month study projects the 9/30/2009 Lake Powell water surface elevation to be above the equalization trigger level of 3,939 feet MSL (in which case, releases will be scheduled to equalize the Mead/Powell contents by the end of the water year; or make Powell releases so that Powell's elevation declines to 3919 or Lake Mead rises to above 1105 feet MSL, whichever occurs first.
- Hoover Dam will be operated under an Intentionally Created Surplus (ICS) condition to meet the basic demands of 7.5 maf along the Lower Basin mainstream plus allow those entities who have created ICS during 2009 or in a previous year (or, like MWD, will have ICS credits created by virtue of their participation in the Drop 2 Reservoir project) to receive their requested ICS water during calendar year 2009. Mexico will be allowed to schedule the delivery of 1.5 maf during calendar year 2009.

The language in this AOP was subjected to additional scrutiny, and likewise there was additional resistance on the part of Reclamation (as instructed by the Solicitor's Office) to language changes on account of the *Grand Canyon Trust vs. U.S. Bureau of Reclamation, et al.* lawsuit in which the plaintiff claims that the Bureau's current operation of the Glen Canyon Dam, particularly the Dam's non-seasonal fluctuating releases of water into the Colorado River,

jeopardizes the endangered humpback chub and has failed to comply with the Endangered Species Act and the National Environmental Policy Act. Fortunately, Judge Campbell, in his order of September 26, 2008, determined that preparation of the Annual Operating Plan is NOT an agency action subject to NEPA review.

Historical Context

On January 18th, eighty-five years ago (1923), State Engineer Frank C. Emerson presented his report on the negotiation of the Colorado River Compact to the Wyoming Legislature. It would seem to be an appropriate time to review and remind readers of the sentiments and philosophy that our predecessor, who was a visionary Wyoming water leader, had applied to the problems at hand – and why he felt that the Compact was the most appropriate and workable solution to put in place for the long term:

> "Although the legal and technical phases of the Colorado River problem are many and important, there come out of the whole question certain fundamental principles applying to the situation which can be well understood by anyone interested. All can realize the natural physical situation which causes the division of the river into two great basins; that the economic conditions that apply to the two basins are entirely different, and that therefore a division of water between the two basins is a very logical plan; that the additional development of the Green River and the Little Snake River basins in Wyoming will be very tardy as compared with development in California; that if proper agreement can now be had between the great conflicting interests upon the Colorado River this accomplishment would be most desirable for all.
>
> We do need to clear our vision if only in the light of the protection of Wyoming interests. We need to realize that, instead of the Colorado River Compact being negotiated for the benefit of California as some would believe, the facts will in reality show that the compact idea was initiated by the Upper States for their own protection. Interests upon the lower river have consistently opposed the compact plan believing that their development would be rapid and assurance of water supply would come to them through priority of use. The real main incentive the lower river has in agreeing to compact grows out of the fact that they wish, and to a certain extent need, the support of the upper river, in order that their projects may be put over in the most competent manner through national legislation or otherwise.
>
> The Upper States' support must be largely contingent upon an agreement that will protect our water supply against the lower developments; therefore the conception of the treaty plan of solution of the Colorado River situation at the Denver meeting of the League of the Southwest in August 1920.
> We cannot lose sight of the situation on the lower river with its economic phase that will force early development whether we support or oppose, and its humanitarian phase in relation to the flood menace. Whether we look at the question from the standpoint of our own selfish interests, or whether we have the desire to extend our reasonable aid to a serious situation, the question demands our attention. To properly protect Wyoming interests we must know conditions that apply to other sections of the river.

> To our own State we have a dual responsibility: first, that we must be convinced that we are not jeopardizing any of the material interests of Wyoming either now or for the future; second, that we do not miss the opportunity that now appears to be knocking at our door. As serious a responsibility as is the first, the second is fully as important. Wyoming and the other Upper States are in a strategic position today that we will never have again. Once means is provided for the construction of a great control reservoir on the lower Colorado the need for support from the Upper States will be largely gone; once the Colorado River bursts through the man-made levees that stand between it and the great Imperial Valley, as it may now do any day, public sentiment will force a bill through Congress providing for relief. A great reservoir will come with its threat to establish priority to use of water and to build up powerful interests on the lower river that will not look with favor upon developments in the upper reaches. Despite any opposition we may present, either the economic or the flood situation, or both, will force development upon the lower river. Then our real opportunity for a protecting agreement will have passed.
>
> Presented to this Legislature is a comparatively simple workable agreement that will protect Wyoming interests in the water supply of the Colorado River."

The Interstate Streams Division continues to represent the State of Wyoming so as to protect Wyoming's interests in the water supply of the Colorado River – and to preserve our ability to continue to develop our remaining, rightful share of that water supply. We remain mindful of Emerson's approaches as we conduct our work in other Colorado River basin ongoing efforts that due to space considerations in this report are only mentioned in passing. These include: serving as Chairman of the Resolutions Committee for the Colorado River Water Users Association; participation on the Adaptive Management Work Group for the Glen Canyon Adaptive Management Program; and serving as the Chairman of the Upper Colorado River Commission's Engineering Committee and as Technical Advisor to the State Engineer in his capacity as the Wyoming Commissioner to the Upper Colorado River Commission.

Colorado River Compacts Administration Program

The Colorado River Compacts Administration Program was initiated in 2006. The overall purpose of the program is two-fold; 1) to strengthen the State's abilities to perform administrative requirements within Wyoming outlined in the Colorado River and Upper Colorado River Basin Compacts, and 2) to provide the State of Wyoming, State Engineer's Office with the capability to annually and accurately estimate the quantity of water that is being consumptively used in the Colorado River Basin of Wyoming. The initial objective for this program was to develop a plan and associated implementation budget to begin to acquire the tools and subsequent data necessary to meet the program goals. This plan, entitled the Consumptive Use Determination Plan (CU Plan), was completed and approved by the State Engineer in January 2008. To date, the plan has been widely distributed to water users throughout the basin. Plan development and implementation, as well as overall program management is the responsibility of the Colorado River Coordinator (CRC).

The CU Plan was structured to address seven main components. These components include; 1) climate and hydrology, 2) diversion and consumptive use, 3) water rights attribution, 4) reservoir operation, 5) groundwater, 6) administration/decision support tools, and 7) outreach. Implementation of many of the activities outlined in the CU Plan was dependent on approval of the Program's FY09-10 budget request. That funding request was approved by the 2008 Wyoming legislature, with funds becoming available 1 July, 2008.

Below is a brief description of activities undertaken during Water Year 2008 (WY08) under the seven program components outlined in the CU Plan. Noted are completed efforts, status of ongoing tasks, any proposed changes in direction of the program, and/or newly proposed tasks or program requirements.

Climate and Hydrology

The majority of the consumptive use of water in the Green River basin is via the evapotranspiration of water from irrigated lands. Regardless of the specific method used to estimate the ET from these areas, high quality weather data is needed. Funds for five fully-equipped agriculture weather stations were provided to the program in the FY09-10 budget and are planned for installation during 2009. Currently, discussions are ongoing with the High Plains Regional Climate Center in Lincoln, NE about providing technical advice and data QA/QC for these stations.

In addition to the five stations described above, the two ET stations installed in 2007 were operated throughout the 2008 growing season. The stations will be shut down for the winter. Sensors will then be recalibrated before redeployment in the spring of 2009.

In terms of hydrology, the development of a basin-wide hydrology model is under review. Based on recent discussions with the staff of the Wyoming Water Development Office (WWDO), it has been agreed that the WWDO will take the lead on the development of a hydrologic model while the SEO will focus its efforts on building a system to collect the water supply and diversion data necessary to "drive" the hydrologic model.

In the 2009 Omnibus Water Planning bill, the Wyoming Water Development Office has requested $250,000 to conduct a feasibility study for a Green River basin decision support system (DSS). Additional discussion relative to a DSS is provided under the "Administration/ Decision Support Tools" section below. Whether the WWDO plans to focus on a full DSS or a hydrologic model if this funding is approved is unclear at this time.

Diversion and Consumptive Use

The collection of additional, higher quality stream and diversion data in the Green River basin is a high priority. To that end, an enhanced instrumentation network with radio telemetry capabilities is being designed and constructed for over 250 stream and diversion sites in the basin. Funding to complete about 100 of these sites is currently available. The instrumentation and radio telemetry efforts in the Green River basin have progressed significantly since the funding became available on 1 July, 2008. A Federal Communications Commission radio frequency license for use in the basin was obtained after six months of effort. A technical services agreement for support services has been signed with the Bureau of Reclamation. Telemetry equipment for up to thirty sites was ordered and is now in-hand. The CRC has

attended training on the programming, wiring and installation of SCADA systems. Sites in the Bridger Valley area were tested for radio signals and preparations for instrumentation were completed at several locations. The CRC is coordinating the purchase and installation of the radio equipment while the Division IV field staff are identifying specific sensor needs at each site.

The four sites in the Little Snake River drainage are being addressed by Division I staff. These sites will transfer data through the GOES satellite system, which is being used throughout Division I.

The remote sensing project initiated with the Wyoming Geographic Information Science Center (WyGISC) at the University of Wyoming in 2007 has now been completed. This portion of the project involved the programming of the ET algorithms (METRIC™; University of Idaho), calibrating the model to terrain and climate conditions in the Wyoming's Green River basin, and the production of seasonal ET maps for irrigated lands within two Landsat image footprints for the 2007 growing season. The main problem encountered during this effort was the number of cloudy days during Landsat passes. This limited the number of images that could be analyzed. An expanded effort using two types of satellite imagery, as well as ground-based instrumentation will be undertaken during 2009. The new effort will be led by the Department of Civil Engineering at UW.

In a cooperative effort between the State Climate Office, the University of Wyoming (Department of Civil Engineering) and the State Engineer's Office, two energy flux towers (eddy-covariance type) were installed near Pinedale during 2008. The two stations were operated by the CRC during the 2008 growing season. The sites were shut-down for the winter, but will be reactivated during 2009 as part of an expanded study being developed with the University.

Although the consumptive use of water from irrigated lands accounts for the majority of water use in the basin, municipal and industrial uses need to be accounted for as well. With that in mind, the CRC met with personnel at the two PacifiCorp facilities in the Green River basin (Naughton and Jim Bridger power plants) and toured their water operations. The CRC has also discussed water use with the Sweetwater County Joint Powers Board. Letters requesting water use information for WY2008 were sent out to all municipal and industrial water users in the basin. Total response rate is unknown at this time, but appears to be good with municipal users. Additional outreach efforts with other industrial waters users in the basin need to be pursued in the coming year.

Water Rights Attribution

The need for a good overall understanding of the number, type and land coverage of irrigation water rights in the basin was recognized as a high priority item at the inception of this program. In conjunction with the Wyoming Attorney General's Office, this task was implemented in July 2007 under a contract with Leonard Rice Engineers, Inc. This project, termed Water Rights Mapping & Attributing – Phase I, is now nearly complete.

The primary objective of this effort was to digitally map all irrigated lands in the basin and the construction of a geodatabase with pertinent permit information (i.e. priority date, source, amount) linked to the digital maps. No major problems were encountered during this effort.

Final products will include GIS-based maps with all irrigated lands in the basin delineated, as well as the populated geodatabase. The results of this effort will enhance several other program activities in the coming year. The information generated will also be critical in the event the administration of water rights under a curtailment were ever necessary.

Discussions with the contractor about Phase II of this project have just been initiated. Phase II will include adding the municipal and industrial water rights to the geodatabase as well as assistance in resolving specific issues identified in Phase I.

Reservoir Operation

As part of the effort to identify and prioritize sites for instrumentation and telemetry, several reservoirs were reviewed for inclusion by Division IV field staff. These sites will be addressed along with all other stream and diversion sites as the instrumentation efforts move through each sub-basin. The CRC has coordinated with the WWDO relative to their desire to install some instrumentation at High Savery Reservoir. This will take place in the spring of 2009.

There are ongoing discussions relative to the operation and contracting of water from Fontenelle Reservoir. The Director of the WWDO is leading these efforts and has met with Bureau of Reclamation staff. There has been general agreement on operating principles of Fontenelle Reservoir. A formal written agreement is being developed between the parties. In addition, there are discussions underway with third parties relative to "ready-to-serve" contracts.

Groundwater

As part of the Green River Basin Plan update being completed by the WWDO, the Wyoming Geological Survey and the U.S. Geological Survey were contracted to complete an inventory and assessment of available groundwater information in the Green River and Little Snake River basins. That report is now complete and will serve as the base for any needed groundwater assessments as part of this SEO program. The consulting geohydrologist (Hinckley Consulting) that was hired in 2007 continues to serve as technical expert on issues as they arise in the groundwater arena.

Administration/Decision Support Tools

The ultimate goal of any action taken under the auspices of this CU Plan and the overall Colorado River Compact Administration Program is to have a clearly defined and defensible approach to the implementation and administration of an Upper Colorado River Basin Commission (UCRBC) initiated curtailment. With that in mind, there are several areas, exclusive of the data needs defined above, which have warranted consideration and discussion during the past year.

First, there are the numerous questions on "how" exactly the UCRBC might make and oversee a curtailment. Although the language addressing curtailment has been around since the signing of the 1948 Upper Colorado River Basin Compact, no curtailment has ever occurred. This situation has resulted in a significant gap in what most would agree is the intent of the Compact relative to a curtailment, and the actual processes needed to quantify and implement such a curtailment call. The Engineering Committee of the UCRBC continues to work on the development of a "Principles for Administration of Curtailment under the Upper Colorado River Basin Compact"

document, which is hoped will help define the specifics of a curtailment process. Wyoming is represented by the SEO's Interstate Streams Engineer in this effort.

Second, although the UCRBC will have the lead role in defining the timing and quantity of any curtailment, the actual implementation will be left up to the individual states (presumably in accordance with each state's water law). There will no doubt be questions and issues which arise that will necessitate a review and/or ruling by the UCRBC and the State Engineer. Although it would be impossible to foresee all issues which may arise, it would be beneficial for water users and SEO staff to have thought about and had the opportunity to develop potential procedural approaches to various levels of curtailment. To begin to address some of these issues, Wyoming's Upper Colorado River Compact Administration Committee met in September at the request of the Wyoming State Engineer. Given ongoing discussions among the Upper Colorado River Commissioners and the UCRBC Engineering Committee about the development of so-called "Principles" document, the State Engineer wants to assure that we in Wyoming are well prepared for those discussions and have thought through policy ramification and other potential impacts to Wyoming. This group will continue to meet as needed.

Finally, to more readily process and synthesize all the data generated as this CU Plan is implemented, it will be beneficial in the future to develop some type of DSS to support the entire effort. In 1992, the State of Colorado initiated a program to develop such a tool for each of their major river basins. The Colorado River Basin was the first to be completed, in 1998. Colorado is the only state to have such a tool (actually many tools which have been seamlessly integrated), and certainly puts Colorado in the forefront of water management both relative to in-state and interstate needs. Several members of the SEO and WWDO staff's met with the Colorado Water Resource Board staff responsible for the development and maintenance of Colorado's DSS. Discussions were fairly general in nature. The CRC has also discussed the DSS concept with several consultants who have had a part in the development of Colorado's or other state's DSS. There have been ongoing discussions with WWDO relative to this effort in addition to the funding request described in the "Climate and Hydrology" section above.

Bear River Basin

The Bear River Commission met November 27, 2007 and April 22, 2008. Bear Lake continues to hover around the compact defined elevation of 5911' which dictates whether Amended Compact storage may take place in the upper basin. Bear Lake did not go above this elevation in the spring of 2008, so storage at Woodruff Narrows Reservoir was restricted to a level below the capacity of the reservoir. Due to the cool spring conditions, the Reservoir Company did a good job of staying within their compact allocations. The Technical Advisory Committee (TAC) met August 22, 2008 to develop a recommendation to the Commission on what role the Commission should play as new, large developments are planned for the basin. One large housing development near Bear Lake plans to utilize Central Division water rights to offset groundwater depletions in the Lower Division.

The EPA watershed program grant ($800,000) deadline was extended for one year to allow Cache Valley entities additional time to work on a phosphorous trading proposal.

Snake River Basin

The Wyoming State Engineer's Office, the Wyoming Game and Fish Department and the Bureau of Reclamation have been meeting each fall and spring since Wyoming purchased 33,000 acre feet of storage in Palisades Reservoir in 1990. Since all of the contracted use out of both Jackson Lake and Palisades Reservoir is to lands downstream of Palisades in Idaho, the Bureau of Reclamation and the State of Idaho—District 01 allows Wyoming through a paper transfer to use the Palisades water right storage out of Jackson Lake. Winter releases for 2007-08 were maintained between 320-350 cfs. Reclamation again approached Wyoming about obtaining a portion of Wyoming's Palisades Reservoir storage for delivery of water downstream for salmon passage. Their proposal was for Reclamation to "reacquire" the storage space so as to not violate the current Rental Pool rules. Reclamation staff made a presentation to Wyoming and after considering the proposal, Wyoming ultimately declined.

The fall agency meeting was held September 18, 2008 and the winter releases for 2009-09 are set for 450 cfs.

Congressional authorization for designating segments of the Snake River under the Wild and Scenic Rivers Act continues to move its way through Congress; currently the legislation is included in a large public lands bill passed by the Senate and under consideration by the House of Representatives. We have worked with Sen. Barrasso's staff, supplying them with language such that the designation in the Snake River basin can perhaps mimic as closely as possible the process that was used in determining the federal reserved right for wild and scenic designation on the Clarks Fork of the Yellowstone in 1990.

WATER ORGANIZATION AND POLICY ISSUES

Water Forum: The State Engineer serves as the Chairman of the Wyoming State Water Forum. The Water Forum meets monthly beginning in September and ending in May and provides state and federal agency personnel a regular opportunity to share information and insight on water activities that are ongoing in their respective agencies. Each month, a special program is presented providing a more in-depth review of a particular water related issue or topic. During this last season, topics for Water Forum ranged from a presentation on the Platte River Recovery Implementation Program to the Laramie County aquifer study. The current schedule and past and current Water Forum minutes are kept on the State Engineer's Office website at: http://seo.state.wy.us/news.aspx. The Forum provides an important information exchange mechanism in an informal setting.

Governor's Planning Office and Army Corps of Engineers Notices: The Interstate Streams Division is responsible for reviewing and responding to all notices received from the Governor's Planning Office and the Army Corps of Engineers. The notices from the Governor's Planning Office include, but are not limited to, proposed actions, scoping statements, environmental impact statements (draft and final), environmental assessments and resource management plans. The notices from the Army Corps of Engineers are notices of applications for Section 404 permits. During this last reporting period, 46 notices were received from the Governor's Planning Office and 6 were received from the Army Corps of Engineers. The Interstate Streams Division is also responsible for attending any meetings that pertain to projects of special interest to the State Engineer's Office. These meetings often include tours of the affected area, open houses and public meetings. Meetings with other cooperators to help develop purpose and need statements and alternatives for projects are also attended by this division.

The Governor's Planning Office has initiated State and Federal Coordinating Committee (SFCC) meetings. These meetings convene on a monthly basis and provide an opportunity for state and federal agencies to discuss National Environmental Policy Act (NEPA) projects and other projects and activities occurring around the state.

Interstate Council on Water Policy:

The ICWP is a nation-wide water policy organization with membership made up of state water resource agencies and interstate water management entities. The ICWP continues to spearhead a work group made up of representatives from ICWP, Western State Water Council, National Water Resources Association and the Association of Floodplain Managers to raise the awareness of the continuing funding erosion of the USGS's streamgaging programs, namely the Cooperative Program and the National Streamflow Information Program (NSIP). ICWP has been working with the USGS to host regional, river basin cooperator meetings. One of these workshops was held in Cheyenne on August 26-27 for the upper Missouri River basin states. ICWP held their annual Federal Roundtable on March 3-7, 2008 in Washington DC in conjunction with the Western States Water Council. ICWP's Annual Meeting was held October 22-25, 2006 in New Orleans. ICWP was approached by the Corps of Engineers to coordinate a study reviewing the status of water planning by each of the 50 states.

Sue Lowry is ICWP's representative to the Advisory Committee on Water Information (ACWI) which is a Federal Advisory Committee Act-commissioned group to provide public input on water programs of the USGS, EPA, NOAA, and other federal agencies. The Water for America initiative would include a water census to be completed by the USGS and a water planning component for Reclamation.

Western States Water Council: WSWC is continuing their work with the Corps of Engineers on a west-wide watershed study. The focus of the study is implementation of the issues identified in a report completed for the Western Governors Association (WGA) entitled: "Water Needs and Strategies for a Sustainable Future". Implementation of the WGA report is the next phase. The WSWC also spent considerable time this year to gain support for funding a thermal sensor on the next launch of the LANDSAT satellite. Many of the western states are now utilizing the thermal data as an input for determining evapo-transpiration losses from irrigated lands.

Upper Missouri Water Association: The 2007 Annual meeting of this group was held in Bismarck, ND on December 4, 2007. The Annual Congressional Briefing was held in Washington DC on April 15, 2008 in conjunction with the National Water Resources Association meeting. The 2008 Annual meeting was held on October 22-23 in Spearfish, SD and a tour was taken of the Hydropower plant that is now operated by the City of Spearfish after it was transferred to them following the closure of Homestake Gold Mine. Sue Lowry continues to Chair this organization and it will be Wyoming's turn to host in 2009. The Association sponsored a review by the 4 member states of their planned need for project pumping power as described in the Pick-Sloan Plan (Flood Control Act of 1944).

Ogallala Aquifer Institute: Although not officially disbanded, no activity occurred with this group during the reporting period.

Other: During this reporting period, the Division also monitored the Bureau of Reclamation's Managing for Excellence efforts, served on the NRCS's State Technical Committee, and coordinated the inter-agency meetings with Water Development Commission, NRCS, DEQ and Game and Fish.

WATER PLANNING

The 1996 Legislature directed the Wyoming Water Development Commission (WWDC) and the State Engineer's Office (SEO) to prepare recommendations for updating the 1973 Wyoming Framework Water Plan. Following this direction, the two agencies submitted a joint recommendation to the Governor, the Select Water Committee, and the WWDC on October 1, 1996. In 1997, the Legislature directed the WWDC to conduct a water-planning feasibility study with the assistance of the SEO and the University of Wyoming (UW). The Bear River Basin was chosen as the site for the feasibility study and a pilot analysis soon began. Throughout the pilot study, the WWDC maintained an intensive public outreach effort, completed a statewide water data inventory, and was advised by a multi-agency scoping group. With the help of an independent consulting firm, under contract to the WWDC, final recommendations for implementing future water plans were drafted for seven planning areas in Wyoming. The recommendations consisted of time lines, necessary agency staffing, estimated costs, process goals, and vision of the final products.

There are seven planning areas within Wyoming – the Bear, Green/Little Snake, Powder/Tongue, Northeast Wyoming (Little Missouri, Belle Fourche, Cheyenne, and Niobrara basins), Snake/Salt, Wind/Bighorn, and Platte basins. The products created for each plan consist of a series of technical memorandum describing each topic outlined in the contract with the WWDC. An executive summary and final report, spreadsheet models of the basin's water supply and uses, and various mapping products are also part of the final product. The Platte River basin includes a web based presentation tool. All of these products are on the Water Planning website (http://waterplan.state.wy.us/). This enables anyone who is interested access to the data, mapping and modeling.

The following table summarizes what has occurred in water planning for each of the basins:

River Basin Plan	Plan Completion	Lead Consultant
Green/Little Snake	December 2000	States West Water Resources
Bear	December 2000	Forsgren and Associates
Powder/Tongue	December 2001	HKM Inc.
Northeast	December 2001	HKM Inc.
Snake/Salt	December 2002	Sunrise Engineering
Wind/Bighorn	December 2002	BRS Inc.
Platte	April 2005	Trihydro

Framework Water Plan

In 2005, the Wyoming Water Development Commission (WWDC) was appropriated $500,000 by the Legislature to update the 1974 State Framework Water Plan. The updated Framework Water Plan summarizes the work that was completed over the last 6 years on all seven river basin plans and serves as a resource for current and future water planning.

WWC Engineering (WWC) of Laramie, WY was selected as the firm to complete the Framework Water Plan. This plan contains two volumes. Volume I presents a statewide perspective on water resources, compiled from the seven basin plans that were completed from 2000 - 2005. The purpose of this document is to provide information so practical decisions can be made concerning water and related land resource development in Wyoming. Volume II provides planning and management direction that is a result of comments and ideas that came from members of the seven Basin Advisory Groups (BAGs), a three-tiered survey, observations of the WWC consulting team and the water planning team, and ideas and opinions of state agency staff. A copy of the 2007 Framework Water Plan can be found at: http://waterplan.state.wy.us/frameworkplan.html

One of the tasks that WWC was asked to perform as part of the Framework Water Plan was to determine the order of the next round of updates of the individual basin plans. When water planning began in 2000, the intent was it would be an ever-evolving process. Now that individual plans have been completed in all seven of the basins and summarized in the 2007 Framework Water Plan, the process has started once again. The Green River basin was suggested as the basin to begin the next round of planning due to significant population growth and energy development.

WWC Engineering (WWC) of Laramie, WY is the consultant for the Green River Basin Plan II Study. WWC is in the process of completing the surface water portion of this study. The final report of the Green River Basin Plan II will be delivered in June of 2009.

Along with the surface water portion of the study, a groundwater portion is also being completed. The Wyoming State Geological Survey is the lead on this portion of the project and will complete their draft report in October of 2008.

Throughout this process, the Basin Advisory Group (BAG) has played an important role in this update. The BAG is made up of stakeholders from throughout the basin. During the Green River Basin Plan II study, the BAG met in November 0f 2007 in Green River; in March of 2008 in Pinedale; in May of 2008 in Lyman; in June of 2008 in Diamondville; in July of 2008 in Marbleton and in October of 2008 in Rock Springs. At these meetings, the BAG is provided an opportunity to discuss important issues with each other as well as with WWC, the WWDC and the SEO. To help initiate this discussion, the group has been asked to think about water issues and strategies to meet the needs that will undoubtedly occur as water use becomes more critical in the Green River Basin. Additionally, these meetings give the SEO the opportunity to keep stakeholders updated on the Green River Consumptive Use Plan and other activities in which the SEO participates as part of the Colorado River Basin.

During the course of this water year, two additional basin plan updates were initiated; the Wind/Bighorn Basin plan and the Bear River Basin plan.

A request for proposal (RFP) for the Wind/Bighorn River Basin Plan II Study was sent out on March 10, 2008. The WWDC received 5 proposals and Short Elliott Hendrickson, Inc. (SEH) out of Ft. Collins, CO was the consultant selected for this project.

As with the Green River Basin Plan II update, a surface water study as well as a ground water study will be conducted as part of the Wind/Bighorn River Basin Plan II update. An appropriation of $500,000 will be split equally between the two studies.

The groundwater project will be led by the Wyoming State Geological Survey with the U.S. Geological Survey and the Water Resources Data System (WRDS) providing technical support. This team will focus on gathering all available data relative to groundwater. They will identify aquifers present in the basin and their associated quality and quantity and attempt to determine recharge areas, recharge rates and safe yield. Any information in existing reports, models and other studies that is pertinent to this study will be gathered into a bibliography. All of this information will then be synthesized into a report that lists the team's findings along with any data gaps and future needs that have also been discovered.

The surface water project will be led by SEH and will update portions of the 2002 plan. Some of the areas to be updated include irrigated lands mapping, which will include a tabulated summary of Tribal Futures Awards, available surface water information, population changes and projections and the socio-economic data. This update will also concentrate on some additional planning aspects that could help local and state decision makers. These planning aspects include looking at water use issues and topics that could influence water management strategies and water use opportunities in the basin. Some of the issues that the consultant has been asked to investigate include water quality issues and climate change and its impact.

Along with the issues mentioned above, SEH has also been charged with recommending strategies to meet the needs of the basin as they are indentified throughout the study. Some of the strategies that have been suggested include implementing water conservation and drought management techniques, developing new water supplies, and improving management of existing water supplies.

The BAG will play an important role in this update as well. Meetings will be held quarterly throughout the basin for the duration of the project. The first meeting of the Wind/bighorn BAG is anticipated to take place in January of 2009.

The update of the Bear River Plan will be conducted differently than has been done in the past. This update will be handled in-house with the Water Planning team performing the work. The Water Planning team consists of members of the WWDC, WRDS, and the SEO.

This update will include a review and evaluation to determine if there have been any significant changes in the basin since the 2000 plan. The Water Planning team will review the previous water plan report, technical memoranda, as well as the spreadsheet model and the irrigated lands mapping. Other reports that have been completed in the basin will also be reviewed for any additional and relevant information.
A BAG meeting for the Bear River Basin Plan II will be held in January/February 2009. The Water Planning team will hold BAG meetings periodically to keep the basin informed and to solicit information from the group.

The final report for this basin will be completed in December of 2009.

WATER CONSERVATION

Sue Lowry continues to serve as the Western States Water Council's representative to the Bridging the Headgate (BTH) partnership. The partnership's goal is to improve communications between irrigators, state water officials, conservation districts, the Natural Resources Conservation Service (NRCS) and the Bureau of Reclamation to use limited resources as efficiently as possible. Dean Marrone is now serving as Reclamation's Field Services Program coordinator, and Peter Robinson is the main NRCS contact to BTH. The group mainly provides an information sharing forum during its quarterly conference calls.

SURFACE WATER AND ENGINEERING DIVISION

by

John Barnes, P.E.
Administrator, Surface Water and Engineering Division

The Surface Water and Engineering Division report includes surface water permit activities, weather modification permits, and dam safety activities. The numbers provided and the comments are for the period from October 1, 2007 through September 30, 2008, which is referred to as Water Year (WY) 2008.

SURFACE WATER RIGHTS SECTION

Objectives

The objectives of the Surface Water Rights Section are mandated by the requirements of State water law and the State Engineer's Rules and Regulations as well as the goal to be of service to the public. The Section objectives are:

1. To promptly review and process surface water applications and petitions and submit them to the State Engineer for his review and consideration.

2. To maintain and update the status of all unadjudicated water rights records to accurately reflect the current status of these permits. The updated records are entered into the water rights database and scanned to keep all records current.

3. To provide a service to the public by promptly filling requests for data on the status of water rights and for copies of records by direct public contact or by providing assistance in the public's use of the electronic retrieval of records

4. To provide technical advice and instruction to engineers, surveyors, and the public on the proper procedures for filing applications for permits, petitions and water use agreements and for permit status updating.

5. To provide technical assistance to the State Engineer, office staff, and water administration field personnel in matters requiring interpretation of surface water rights.

Accomplishments

The 2007-2008 winter showed a much improved snow pack over the previous drought period. The reservoirs on the North Platte River were at low levels at the end of the 2007 irrigation season. There continues to be a large number of inquiries regarding water rights, water law, and related matters.

Categorized work submitted to the Surface Water Division during the period included: a) applications for permits - 798; b) petitions - 22; c) Temporary Water Agreements - 120; d) water rights information searches - 122. In addition, the Dam Safety Section conducted field safety inspections of dams, completed plan reviews and performed other activities as reported in a separate section of this Division report.

Application Reviewing and Processing

A total of 798 surface water applications were received in the period. The following table gives a comparison of applications and petitions filed with the State Engineer for the past years, beginning with FY 2002 and continuing through WY 2008. The end-of-period backlog is 740 applications as the number of CBM reservoir applications has leveled off.

Year	APPLICATIONS			PETITIONS		
	No. Recd	Approve/ Reject	EOY Backlog	No. Filed	Approve/ Dismiss	EOY Backlog
FY 02	1205	661	1856	15	8	84
FY 03	1504	1208	2271	30	14	100
WY 04*	1610	1350	2531	19	17	102
WY 05	1650	2321	1768	23	17	108
WY 06	1413	1610	1347	22	34	108
WY 07	1003	1439	911	23	15	104
WY 08	798	969	740	22	25	101

*Represents a 15-month period: July 1, 2002 to September 30, 2003.

Types of applications fall into several categories. The more complex categories include ditches/pipelines, enlargements, and reservoirs. The less complex applications and those that can easily be reviewed and approved include applications for stock reservoirs and temporary water uses. Applications for permits for instream flows, the first of which was received in FY 1987, include a requirement by law that the State Engineer hold a hearing before granting or rejecting them. Only the state of Wyoming, through the Wyoming Water Development Commission, can file instream flow applications. No instream flow applications were received during the period and no hearings were held.

COMPARISONS OF TYPES OF APPLICATIONS RECEIVED				
Category	WY2005	WY2006	WY2007	WY2008
Ditches/Pipelines	133	101	113	109
Enlargements	19	19	32	54
Reservoirs	366	402	329	205
Stock Reservoirs	975	787	553	310
Temporary Use	152	101	98	120
Instream Flow	5	3	0	0
Totals	1610	1413	1003	798

Petition Processing

The first table printed above included data on petitions submitted to the State Engineer to correct or to amend permits. During the reporting period, the number of petitions either filed, granted or dismissed brought the backlog to 101 on hand. Many of these petitions are associated with cleaning up permits associated with correcting permits to reflect how reservoirs are being constructed in Water Division No. II.

Temporary Water Agreements

Where water is not available under a new permit for construction purposes and other temporary uses, the temporary water users can enter into agreements with holders of valid, senior-priority water rights to obtain water for their temporary needs. Water Agreements must be reviewed and approved by the State Engineer's Office and an Order entered to allow the temporary change in use. To meet the needs of the construction and drilling industries, Water Agreements are quickly reviewed and approval Orders are normally issued within a few days of receipt of the Agreement. In reporting period, a total of 120 Water Agreements were received and approved. A comparison with previous years follows:

FY/WY	Water Agreements
2003	207* (166)
2004	129
2005	140
2006	121
2007	179
2008	120

*Represents a 15-month period: July 1, 2002 to September 30, 2003.
(Represents annualized number)

Permit Endorsements

Once a permit is issued, it is recorded in the computer information system and a permanent scanned image is made. The records must be updated every time a notice for completion of construction or beneficial use is filed with the State Engineer for a given permit. If approved, requests for extensions of time must be endorsed on the permit and the update recorded in the computer and document management system. Eliminations of points of use from a permit, reinstatements of permits, cancellations of permits, assignments, or any other changes by petition to the State Engineer require endorsements to permits and updates of the computer and document management system.

Information Searches

Landowners, surveyors, engineers, attorneys, realtors, and others routinely request copies of permits, certificates of appropriation, maps, and other information pertaining to water rights records. During WY 2008, a total of 122 requests were answered requiring records searches. The following table shows the history in the numbers of requests received.

FY/WY	SEARCH REQUESTS
2002	666
2003	416** (333)
2004	86
2005	120
2006	95
2007	72
2008	122

** Represents a 15-month period: July 1, 2002 to September 30, 2003.
(Represents annual number)

Some of the information requests are related to the preparation of applications and maps by engineers and surveyors for permits or petitions. Again, in the reporting period, the bulk of the requests appeared to be from realtors and bankers who desired water rights information in real estate sales transactions or for use in real estate loans.

Field Activities

Site visits were made to areas where controversies were occurring. Site visits were also made by the Safety of Dams staff to observe reservoir construction, to inspect existing reservoirs as part of the dam safety program, and to investigate alleged illegal activities.

Other Activities

The Surface Water and Engineering Division continue to participate in reviewing the activities of the U.S. Board of Geographic Names (USBGN). This review provides for coordination of names used on maps, particularly those of streams, since every year, many streams are given names by issuance of water rights permits.

The Surface Water and Engineering Division maintain a complete file and inventory of all USGS maps in Wyoming for use by the State Engineer's office and field personnel.

Problem Areas

Coal Bed Natural Gas Reservoir Impacts

The number of reservoir applications filed has continued to fall due to regulatory changes that make reservoirs a less attractive method of handling the produced water. Most of the reservoir applications are for the coal bed natural gas (CBNG) industry in the Powder River Basin. The Division continues to reduce the backlog of applications.

Records Rehabilitation

The past Annual Reports detailed the need to upgrade the condition of the permanent records in the Surface Water and Engineering Division. Maps in bad condition are now being scanned and are available electronically so the original map gets used less. Map records that need to be updated and maintained include the paper plats, USGS maps, county maps, and permit maps-all of which are in daily use for supporting the water rights records and in providing information to the public. All current permits and maps are being scanned and filed. The permits and maps will be rescanned into the new e-permit system at a future date.

Upgraded Technology

The computer system is being used by the Division to access the water rights database including scanned documents, word processing, and power point presentations. Searching the water rights database provides another tool in answering information requests. Data processing problems which have occurred are being addressed. New report formats have been developed. Additional access is being developed to help in application reviews and processing. The water rights database and the scanned images are now available to the public.

We continue to update our current computers with new, higher speed computers to be able to use them with the graphic information systems. Documents within the office continued to be scanned. The public now has access to the scanned documents. We need to continue to update our computers as funds are available.

Division personnel have spent a significant amount of time reviewing the various builds during the development of the new e-permit system.

State Engineer’s Instructions and Regulations

Work has continued on the State Engineer's Office rules and regulations. Rule making authority was sought from the legislature for four separate areas but was not approved. This office will continue to seek legislative approval prior to finalizing new rules and regulations.

WEATHER MODIFICATION PERMITTING ACTIVITIES

Objectives

The primary objective of the Weather Modification Program is to procure, compile and evaluate information resulting from weather modification experiments, research and related activities conducted in the State of Wyoming. Weather Modification Permits are issued by the State Engineer for each modification program, experiment or activity.

Accomplishments

Four permits were issued for weather modification purposes during this reporting period. Permit Number 95 was issued to Eden Valley Irrigation and Drainage District in Farson, Wyoming, with the objective of their continuing weather modification program to increase the water supply in the Big Sandy River drainage. This is a wintertime operation which operates during proper weather conditions from November 15th through April 15th. The mobile, ground-based, cloud seeding generators are strategically placed along Highway 191 and are operated in accordance with daily weather conditions.

The Eden Valley District wintertime project is in its thirty-fifth year of cloud seeding activities in cooperation with the University of Wyoming, Department of Atmospheric Sciences.

Permit No. 96 was issued to North American Weather Consultants for weather modification in the Unita Range south of Lyman. This project would increase flows in the streams flowing into Wyoming on the north side of the Uinta Mountain Range.

Permit No. 97 & 98 was issued to Weather Modification, Inc. for seeding the Medicine Bow and Sierra Madre Mountains west of Laramie and the Wind River Mountains from Pinedale to Lander. These projects are funded through the Wyoming Water Development Commission. This is the second year for these projects.

SAFETY OF DAMS SECTION

Introduction

In 1977, the State Legislature, recognizing the potential hazards to public safety due to waters impounded by dams throughout the state, and the economic benefits of well maintained and safely operated dams, authorized the Wyoming Safety of Dams Program, with passage of the Safety of Dams Law (Wyoming Statutes 41-3-307 through 41-3-318). The law was amended in 1992 to clarify inspection requirements, duties of the State Engineer and lien procedures; provided for penalties; and granted rule-making authority.

While a permit from the State Engineer is required for all dams, the Safety of Dams Law mainly pertains to dams which are greater than 20 feet high or impound 50 acre-feet or more, and diversion systems with a capacity of 50 cubic feet per second or greater.

However, the State Engineer may enforce any sections of the law on any size facility, when necessary, to insure the public safety or the protection of property.

Objectives

The objective of the Wyoming Safety of Dams (SOD) Program is to protect the public safety by reducing the potential for flooding and loss of life as a result of failure of a dam or diversion system. This objective is accomplished in two ways, as stipulated by the Safety of Dams Law:

1. By reviewing plans and specifications for proposed work, which then results in the issuance of a permit, and by reviewing inspection and progress reports outlining current construction activities.

2. By conducting periodic safety inspections of existing facilities.

Accomplishments

During the past year, 35 applications for permits for new jurisdictional size reservoirs were received and 33 plan reviews were completed with 29 permits being issued. The majority of these facilities are associated with storing water produced from coal bed natural gas activities. Other dams were constructed for irrigation, recreation and other mineral extraction activities. Construction was completed on 13 safety of dams size facilities.

In addition to the work involved with design review and/or construction monitoring activities, a considerable amount of time is spent on the other aspect of the Safety of Dams Program, the Periodic Inspection Program. Wyoming Statute 41-3-311 states: "Any dam, subject to the terms of this act shall be inspected at least once every ten years or as often as deemed necessary based on the hazards of the dam to insure the continued protection of public safety and property." Only very low hazard dams located in remote areas of the state are inspected less frequently than once every five years.

Currently, 1,477 dams meet the criteria of the Safety of Dams Law (more than 20 feet high and/or impounding 50 acre-feet or more of water). A total of 317 dams were inspected in Water Year 2007-08 and 271 are due for inspection in water year 2008-2009.

The quality of the safety inspections is steadily improving. This is due to the increased experience and training level of the state water administration personnel in dam inspections and the greater opportunity for the two Safety of Dams Engineers in Cheyenne to conduct routine periodic inspections of larger, high and significant hazard facilities. In addition, we also continue to coordinate safety inspections with federal agencies such as the Natural Resources Conservation Service, Bureau of Land Management, Bureau of Reclamation, Federal Energy Regulatory Commission and Forest Service to draw on the resources and experience of those agencies. Efforts to coordinate with the Mine Safety and Health Administration have been unsuccessful due to apparent lack of interest on Mine Safety and Health Administration's part.

Problem Areas

A continuing problem area concerns dams located on the Wind River Indian Reservation. Because of disputes over jurisdiction, we have problems obtaining timely information on the present conditions of dams (Washakie Dam in particular, a high hazard structure) on the reservation. We have received no information concerning the present condition of the seepage problem that was discovered when the reservoir was being filled after repairs were performed several years ago. We, therefore, do not know if this potentially serious problem has been corrected. The Bureau of Indian Affairs has indicated that they will not be submitting the plans for the upcoming work at Ray Lake for SOD review either.

Coal Bed Natural Gas (CBNG) development is continuing to have a significant affect on workload due to permitting of new dams. The number of plan reviews remains high.

The submittal of documentation to the Safety of Dams division continues to be problematic. The office continually works to improve this process. Further, due to the tight time frames associated with CBNG dams, it is difficult to properly oversee this work.

Due to relatively poor groundwater quality in some areas and DEQ stream discharge standards, much larger CBNG dams are now being constructed than in the past. The purpose is to hold the large quantities of CBNG water being generated so that it can be: permanently retained, piped to areas where it is safe to use or treated prior to release. Some of these facilities are large enough to present a high or significant hazard to downstream development.

Some of the CBNG reservoirs are leaking and pump-back system have been installed to intercept the seepage and pump it back into the reservoir. The facilities are being monitored to insure these systems do not create problems that could lead to dam failure.

Other Activities

Work is continuing on the National Inventory of Dams (NID) Project. We have been compiling information for each of the 1,490 dams in the Safety of Dams Program and preparing a computer inventory containing this information. In the past, part of the funding for this project has been provided by the Association of State Dam Safety Officials (ASDSO) through a "pass-a-long" grant from the Federal Emergency Management Agency (FEMA) and the U.S. Army Corps of Engineers. Data from the state dam safety organizations is compiled by the Corps and published in CD-ROM format periodically. This information is available on their web site. Much of the information requested by the Corps is not readily available and considerable effort has been involved in gathering this essential data to complete our state database and keep it updated.

Considerable assistance to the dam safety program has been provided by FEMA grant funds. The initial three-year of funding has been completed. The project to acquire digital photos of all jurisdictional reservoirs statewide, continued this summer. Approximately 90% of jurisdictional dams have now been photographed. The remaining dams are in very remote areas with difficult access. The grant has also been used to purchase equipment for the field personnel who are involved with inspection of the low hazard dams. This year new GPS units, hand eye levels, digital cameras, and binoculars were purchased.

Some of these FEMA grant funds were also used for training. Three dam safety engineers attended the 2008 Association of State Dam Safety Officials annual conference. Other areas of continuing education for Safety of Dams engineers are: Earthquake Engineering, Slope Stability Analysis, Hydrology and Geographic Information Systems.

The Safety of Dams Section conducted follow up activities for a project begun in 2007 to study dam hazard ratings for dams in Sheridan, Johnson, Natrona and Converse counties. The purpose of the study was to evaluate the effects of increased downstream development on the hazard classification of dams in these high growth areas. Evaluation of the results is ongoing.

During 2008, Safety of Dams contracted with WWC engineering in Laramie to study the effects of multiple, successive dam failures. The study looked at the effects of an upstream dam failure on downstream dams. The study was limited to drainages in CBNG areas. The results, while not conclusive, were encouraging.

In the upcoming year, we anticipate conducting a public outreach program for all dam owners which would provide information about dam safety.

GROUND WATER DIVISION

This Water Year 2008 (WY-08) report covers the time period from October 1, 2007 to September 30, 2008 and comprises two sections; the 1) Ground Water Section, and 2) Cooperative Programs. The Ground Water Section provides an update on the day-to-day activities of the Ground Water Division; the Cooperative Programs section reports on the three programs administered by the Ground Water Division, 1) Surface and Ground Water Data Collection, 2) Snow Survey, and 3) Stream-flow Forecast, and Subdivision Water Supply Adequacy Evaluations. The WY-08 report for the State Board of Examining Water Well Drilling Contractors and Water Well Pump Installation Contractors, the temporary responsibility of the Ground Water Division, is provided later in this report.

GROUND WATER SECTION

By

Lisa Lindemann, P.G., Administrator,
John Harju, Assistant Administrator,
and
the Ground Water Division Staff

Objectives

The objectives of the Ground Water Division (GW) are:

1. To issue, record, maintain, and prepare permits for adjudication which grant the right to appropriate groundwater within the State of Wyoming and maintain a database of approved permits.
2. To resolve conflicts between groundwater users.
3. To conduct Control Area Advisory Board meetings.
4. To coordinate groundwater investigations involving the State Engineer's Office (SEO) and other agencies.
5. To investigate water well construction and enforce the "Water Well Minimum Construction Standards".
6. To protect the State's groundwater resources.
7. To investigate the occurrence of groundwater resources.
8. To monitor ground water levels across the state.

Accomplishments

Application Processing and Recording

During WY-08, GW received 4,977 *Applications for Permit to Appropriate Ground Water*, a decrease of 1,716 applications from WY-07. During WY-08, 5,508 applications were approved to permit status, 330 less than WY-07. Seventy (70) applications were rejected in WY-08, 6 less than WY-07. In addition to applications for new appropriations of groundwater, 78 requests to relocate and/or deepen an existing well were received and processed, 41 less than WY-07.

One of the primary reasons the GW Division processed less applications in WY-08 appears to be an apparent decline in Coal Bed Methane (CBM) production activities. Additionally, GW started testing the new e-permit system in WY-08. Processing of the applications has become much more complex which has resulted in an increase in staff time required for processing each individual application. Applications are currently being processed twice, first using our current paper method and then on the new e-permit computer system. Countless hours of GW staff time are now used double processing applications until the e-permit system has completed beta testing and goes live to the public in WY-09.

Permit Cancellation Program

During WY-08, 1,793 permits to appropriate ground water were cancelled because the permittee either failed to submit the required notices (i.e., the *Statement of Completion and Description of Well or Spring* and *Proof of Appropriation and Beneficial Use of Ground Water* forms) within the statutory time limits, or the permittee requested cancellation of the permit. This is an increase of 538 from WY-07. Abandoned wells for which the attendant water rights were cancelled amounted to 512, an increase of 41 from WY-07. The figure for abandoned/cancelled permits is separate from the count for cancelled permits where the required notices were not filed. These wells were in use and were subsequently abandoned, generally for physical failure.

Six thousand and seventy nine (6,079) certified expiration letters were prepared and mailed, notifying applicants that their well permits were about to expire because the *Statement of Completion and Description of Well or Spring* form or *and Beneficial Use of Ground Water* form had not been properly submitted. Six hundred and seventy one (671) fewer letters were sent in WY-08 than WY-07.

Forty seven (47) Coal Bed Methane (CBM) Use permits were suspended due to the long-term production of water and the failure to produce gas.

Permit Maintenance Program

One thousand and eighty seven (1,087) assignment requests were received in WY-08, an increase of 132 requests from WY-07. The ownership of 1,187 permits to appropriate ground water was assigned to different owners during WY-08, an increase of 786 assignments from WY-07.

Requests for 2,648 extensions of time to provide a *Statement of Completion and Description of Well or Spring* or *Proof of Appropriation and Beneficial Use of Ground Water* form were received, processed and approved, an increase of 1,213 requests from WY-07. Thirteen (13) requests for additional points of use were received, processed and approved, an increase of five from WY-07. Two thousand, three hundred and fifty five (2,355) permits were updated with *Statement of Completion and Description of Well or Spring* or *Proof of Appropriation and Beneficial Use of Ground Water* forms. GW received and processed 75 miscellaneous updates.

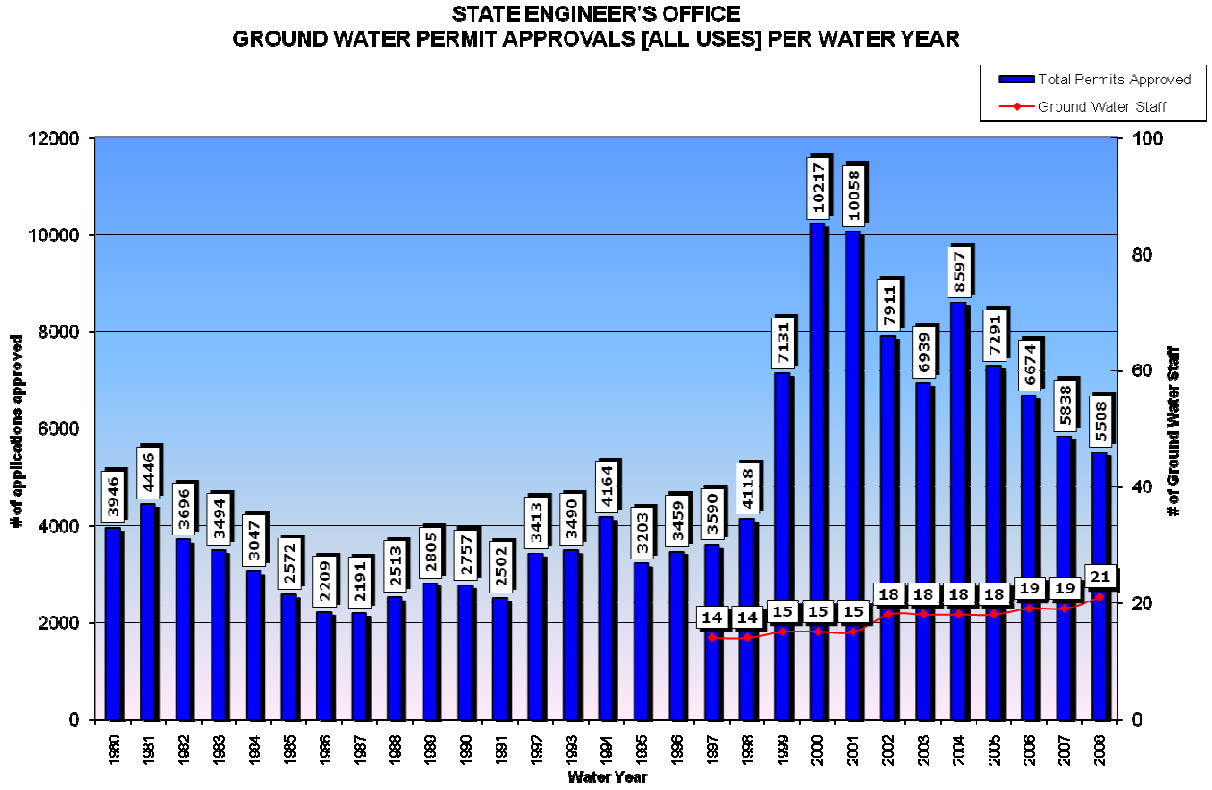


Figure 1

Water Right Search Requests

One hundred and fourteen (114) "major" ground water rights searches were conducted for realtors, water resource consultants and other interested parties during WY-08. The availability of the SEO's water well data through internet access has decreased the amount of search requests GW receives throughout the year. Numerous smaller water right searches are requested daily, either by telephone request or in person, but these are not reflected in the number referenced above. It is estimated the smaller requests range from 7,000 to 10,000 per year.

Two Year Review Letters

As a result of conditions and limitations placed on observation and monitor well permits which require a two-year review to determine if the well still exists or if it has been "mined out", plugged and abandoned, etc., forty-four permits were reviewed during WY-08.

Adjudication of Water Rights

During WY-08, 214 water rights were inspected by GW staff and adjudicated by the Board of Control, including 81 water rights at the November 2007 meeting and 133 at the May 2008 meeting. Additionally, 59 proofs were carried over at the November 2007 meeting and 29

proofs were carried over at the May 2008 meeting. Per a Board decision made at the November 2007 meeting, GW will no longer present new carry overs at Board meetings.

Two hundred and thirteen (213) *Maps to Accompany Proof of Appropriation and Beneficial Use of Ground Water* were received in WY-08, representing 316 water rights to be inspected by GW (maps may depict more than one well or an enlargement of a permit). This is an increase of more than 27% in the number of maps received in WY-07 (167) and an increase of 13% in the number of permits from WY-07 (280).

Approximately 67% of the maps (142 of 213) were original submittals; 13% of the maps (27 of 213) were received only after GW staff diligently followed up on appropriators who had not submitted the required map to-date; and 21% of the maps (44 of 213) were resubmittals of revised maps.

Control Areas

Laramie County Control Area

Two (2) Laramie County Control Area Advisory Board meetings were held in WY-08; one on January 15, 2008, the other on April 8, 2008.

The Laramie County Control Area Advisory Board elections were conducted on July 9, 2008. In District 2, Dale Martin was elected to serve a second term. Don Brown, a new Board member, was elected to serve for District 1. Both Board members terms will expire in 2012. No Board member was elected for District 3.

As reported in previous Annual Reports, the State Engineer received a request for regulation of the Crow Creek Watershed. The Advisory Board chose not to make a decision in regards to regulation. They recommended that additional information be obtained on the impact of each possible corrective control scenario i.e., installing meters, defining the irrigation season, prohibiting the use of end guns, well spacing, etc., before they could recommend regulation be implemented. The Wyoming Water Development Commission (WWDC) funded an aquifer study for Laramie County. It is anticipated that this study will be a useful tool in assisting the SEO in determining the availability of the ground water resource in the control area. This study is expected to be completed in early WY-09.

Eleven (11) applications were received and advertised in the Laramie County Control Area during WY-08.

The following applications for Irrigation use were received and recommended for approval during WY-08:

- Permit No. U.W. 186567, 2nd Enl. Hutchinson No. 1; Donald L. Judy, Jr. and Retta M. Judy; protest was received; Pre-Hearing Conference held on June 6, 2007; Hearing conducted on July 19, 2007. The Laramie County Control Area Advisory Board members recommended approval to the State Engineer at the April 8, 2008 Advisory Board meeting. The Order of the State Engineer to approve the 2nd Enl. Hutchinson No. 1 well was issued in WY-08.

- Permit No. U.W. 186203, Enl. of Ragland No. 2 Well; Loyd Farms; and
- Permit No. U.W. 186204, Enl. of Ragland No. 1 Well; Loyd Farms.

The following applications were received and advertised during WY-07. However, the applications were recommended for approval during WY-08 (Irrigation Use unless otherwise noted):

- Permit No. U.W. 187808, Sonny No. 2; Jack E. Porter; protest was received; Pre-Hearing conference was scheduled for WY-08. No response was received to the Pre-Hearing memorandum. Therefore both the Pre-Hearing Conference and the Hearing were cancelled.
- Permit No. U.W. 184412, 2nd Enl. J.J. Exploratory #1; Berry Ranch Limited Partnership;
- Permit No. U.W. 186873, Enl. Archer Motorcross #1; Wyoming Water Development Commission (Miscellaneous Use);
- Permit No. U.W. 186874, Archer Well 401; Wyoming Water Development Commission (Miscellaneous Use); and
- Permit No. U.W. 186875, Archer Well 600; Wyoming Water Development Commission (Miscellaneous Use).

One (1) new Board of Control petition was received and advertised in the Laramie County Control Area in WY-08.

The following Board of Control Petition was granted:

- BOC Petition I-U-2008-1-1; High West Energy: Petition for Change in Location of the Tri State Equip. #1 Well. Granted Conditionally at the February 2008 meeting. Conditions met at the May 2008 meeting.

The following Board of Control Petition has not been granted for the reasons noted:

- BOC Petition No. I-U-2007-1-9; Donald L. Judy, Jr. and Retta M. Judy, Petition for Change in Location of the Hutchinson No. 1 Well; protest was received; Pre-Hearing Conference held on June 6, 2007; at that time it was determined the petition was not being protested, only the enlargement application (see above). This petition was Granted Conditionally by the Board of Control at the February 2007 meeting. Due to the status of the enlargement application, the petition was Continued for the May and August 2007 meetings. The enlargement application was granted May 5, 2008. The petition was Continued for the November 2007, February 2008 and August 2008 meetings awaiting the receipt of a relocated statement of completion.

Platte County Control Area

Two (2) Platte County Control Area Advisory Board meetings were held during WY-08; one on January 8, 2008, the other on May 6, 2008.

The Platte County Control Area Advisory Board elections were conducted on July 2, 2008. In District 1, Doug De Rouchey was elected to serve a second term. In District 2, Richard Johnson, and in District 3, James Rietz will serve as new Advisory Board members. The terms of the Advisory Board members will expire in 2012.

Nine (9) applications were received and advertised in the Platte County Control Area.

The following 5 permits for Irrigation use were received and recommended for approval during WY-08:

- Permit No. U.W. 187008, Enl. David #1; JoAnne Reffalt;
- Permit No. U.W. 184413, Enl. of Guldan II, Michael J. Guldan;
- Permit No. U.W. 186616, Erickson No. 1; EE Realty, Inc.;
- Permit No. U.W. 186617,Jo No. 1; EE Realty, Inc.; and
- Permit No. U.W. 186636, Nagle No. 3; Hardrock Farms, Inc.

The following applications for Irrigation Use were received and advertised during WY-07; however, they were approved in WY-08:

- Permit No. U.W. 186102, Enl. Ben No. 1A; Bard Ranch;
- Permit No. U.W. 184410, Tuddy #1; Leander F. and Gayle S. Mausbach; and
- Permit No. U.W. 184411, Enl. Arlo Bowen No. 4; Pat Bowen.

Three (3) Board of Control petitions were received and advertised in the Platte County Control Area in WY-08.

The following Board of Control Petition was granted:

- BOC Petition Docket I-U-2007-4-6; Douglas S. Meyer: Petition for Change in Location of the Shepard No. 3 Well and its enlargement; carried over at the August 2007 meeting to await a recommendation from the Advisory Board. Granted conditionally at the November 2007 meeting. Continued at the February 2008 and May 2008. Granted at the August 2008 meeting.

Prairie Center Control Area

One (1) Prairie Center Control Area Advisory Board meeting was held on November 29, 2007. The Advisory Board members, as well as members of the public, were in attendance and continued to express their displeasure at past permit approvals by the State Engineer. No election for new board members was held during WY-08 as no terms expired.

No applications or petitions were received for the Prairie Center Control Area in WY-08.

The following applications were received and advertised during WY-07; however, they were recommended for approval in WY-08:

- Permit No. U.W. 183837, Enl. Big Prairie No. 1 (Miscellaneous Use); Blair J. Merriam; protests received; Hearing conducted March 15, 2007; reviewed by Advisory Board June 14, 2007; Order was prepared and issued in WY08.
- Permit No. U.W. 183838, Enl. Big Prairie No. 2 (Miscellaneous Use); Blair J. Merriam; protests received; Hearing conducted March 15, 2007; reviewed by Advisory Board June 14, 2007; Order was prepared and issued in WY08.

One (1) new Board of Control Petition was received and advertised in the Prairie Center Control Area in WY-08.

The following Board of Control Petition was granted:

- BOC Petition Docket I-U-2007-4-3; Steve Cole, Trustee of the Steve Cole Trust: Petition for Change in Location of the Serres Pump No. 1 Well; Granted conditionally at the November 2007 meeting to await a recommendation from the Advisory Board. Continued at the February 2008 meeting. Conditions met May 15, 2008.

The following State Engineer Petition was received and advertised during WY-06; however, it was granted in WY-08:

- State Engineer Petition Docket No. U.W. 2005-8; Blair J. Merriam; Petition to Correct Errors in the Big Prairie No. 1 and No. 2 Wells. The petitions were protested. Hearing conducted March 15, 2007; reviewed by Advisory Board June 14, 2007; Order was prepared and issued; Petition Granted November 7, 2007.

Current Control Area Issues

As discussed in previous annual reports, not being able to use ballots-by-mail has hindered GW's ability to obtain recommendations for applications and petitions in a timely manner; as can be seen from the above listings where no action was taken.

Also as discussed in previous annual reports, the number of applications and petitions which are protested each year has increased. Tremendous amounts of staff time are required to contact appropriators and protestants, schedule and conduct the pre-hearings and hearings, schedule advisory board meetings, interpret and review all the data gathered at the hearing, and prepare the Order of the State Engineer.

The Laramie County Control Area Advisory Board members have expressed concerns with the continued water levels dropping within the Control Area. They have discussed establishing "critical areas" in some parts of Laramie County where no new irrigated acres or high capacity wells will be approved within this area. However, they hesitate in making this recommendation to the State Engineer due to the impact it would cause to the farming community. They have also expressed their concerns with the amount of new domestic wells being approved and drilled within the Control Area. They feel the domestic wells are part of the cause of the dropping water levels in the area. They would like to see these types of wells limited or stricter spacing regulations applied to them.

The Prairie Center Control Area Advisory Board continues to struggle making decisions based solely upon water right issues. Their frustration with the State Engineer lies largely with non-water right issues over which the State Engineer has no jurisdiction.

Outreach

GW staff time and resources are also spent attending public meetings, making presentations, coordinating with other regulatory agencies, reviewing and providing comments on Environmental Impact Statement (EIS) and Environmental Assessment (EA) documents, reviewing water management and usage proposals, investigating ground water supply problems, installing and maintaining monitoring wells, and fulfilling information requests related to CBM development.

An example of events in which GW staff participated includes:

- **Laramie County Master Gardeners,** Class on Ground Water and Wyoming Water Law, Cheyenne, Wyoming, January 2008;
- **Water Commissioners' School**, Laramie, Wyoming, March 24-26, 2008;
- **NRCS Laramie County Field Office Local Work Group,** Cheyenne, Wyoming, November 13, 2008;
- **WWDC Laramie County Ground Water Management Project**
- **WY DEQ/ USACE Missile site 4 cooperative meetings and public meeting,** Cheyenne, Wyoming, Various dates;
- **Wyoming Association of Rural Water Systems**, Pre-conference presentation on Taking Care of our Water Resources; September 23rd; and
- **2008 Western South Dakota Hydrology Conference**, Rapid City, South Dakota.

Modified North Platte Decree

Previous Annual Reports outline the chronology of events that led to the creation of the Modified North Platte Decree. The implementation of the Modified North Platte Decree continues.

Reporting

During WY-08, GW continued to report to the North Platte Decree Committee (NPDC), on a monthly basis, applications received, and permits approved for Irrigation Use permits within Wheatland Irrigation District. Industrial and Municipal Use permits within the remainder of the Basin that are subject to the provisions of the Modified North Platte Decree were also reported, including:

- six (6) applications for new Irrigation Use permits within the Wheatland Irrigation District were reported.
- one (1) application for a Municipal Use permit was reported.
- Sixteen (16) applications for Industrial Use permits were reported.

Six (6) Irrigation Use permits within Wheatland Irrigation District, 5 permits for Municipal Use, and 18 permits for Industrial Use were subsequently reported as approved permits. Seven (7) Industrial Use applications were ultimately reported as being rejected.

GW also reported the annual pumpage of ground water under 48 Irrigation Use permits within the Wheatland Irrigation District to the NPDC during WY-08.

Coal Bed Natural Gas or Coal Bed Methane

Coal Bed Natural Gas (CBNG) or Coal Bed Methane (CBM) exploration and production applications for new wells recorded a substantial decrease during WY-08. The SEO received 2,157 CBM applications during WY-08 from 30 companies. The following table provides a comparison of GW-CBM permits approved and the number of companies submitting applications per water year.

Annual Report Year	Total Applications	Number of Companies
2008	2157	30
2007	3405	34
2006	3632	56
2005	4784	52
2004	4758	39
2003	3938	48
2002	5663	58
2001	6093	55
2000	5811	86
1999	2532	51

In WY-08, lawsuits, tighter water discharge requirements and the lack of infrastructure seem to have decreased the number of traditional CBM applications that the SEO is accustomed to seeing. The region's CBM operators are being slowed by the lack of sufficient pipeline infrastructure being available to bring the gas to market; this is believed to be an issue in the declining new well construction. The Wyoming vs. Montana federal lawsuit over new Montana water quality standards affecting the Tongue and Powder rivers is also believed to be a cause for the delay in applications received. Companies also continued to focus on correcting past permitting errors or expanding existing permits by filing miscellaneous and/or stock enlargement applications for their existing CBM wells to add additional uses for stock tanks, reservoir supply and/or irrigation. These enlargement applications are not part of the total CBM application count.

The SEO began activities in WY-08 regarding requests for information from operators about CBM wells producing water without production of gas. That work began as an effort to reduce unnecessary water production from coal and targeted 296 wells in the Crazy Woman and Clear Creek drainages of northeastern Wyoming. It resulted in "show cause" letters to ten natural gas operators in the Powder River Basin of Wyoming. From that effort, two operators contested the letters while eight did not. In this effort, permits for 239 wells of the 296 targeted are now either cancelled or suspended. The most recent action in the Powder River Basin targets 784 wells and 40 operators. All wells have at least a five-year history of production of water with no attendant gas production, according to Wyoming Oil and Gas Conservation Commission (WOGCC). The current "show cause" letters provide the opportunity for operators to provide additional information to justify why their SEO well permits should remain in good standing.

On December 11, 2007, the CBM Conditions & Limitations that are attached to each permit were restructured to include the mitigation of permitted domestic and/or stock wells located within a one half-mile radius of the CBM well and they also now include the water/gas ratio for the well must not exceed 10 bbl/mcf after an initial period of up to three years. In the event the water/gas ratio from the well exceeds 10 barrels per thousand cubic feet (bbl/mcf), the permittee is required to show cause as to how gas production is intended to occur in furtherance of the beneficial use for which this permit is issued.

The Powder River Basin continues to be the largest area being developed for CBM and thus represents the largest proportion of permit applications received.

Observation Wells/Monitor Wells

Previous Annual Reports outline the development and spatial distribution of the observation well network maintained by the SEO. GW maintains a network of approximately 265 active observation wells throughout the state and a number of inactive observation wells pending rehabilitation or abandonment. Additional facilities that need to be removed from service included monitor wells installed for interference investigations.

WY-08 has seen continued improvement to the ground water observation well network and GW's efforts. This includes continued development of quality control and quality assurance program for ground water level data program, in-house programming of software for data warehousing and analysis to replace legacy software, acquisition and installation of new recording equipment, and continued compliance with the health and safety plan of the agency.

WY-08 has seen continued change, use, and dissemination of data from the SEO and Cooperative observation well networks. The following sections will expand on the activities of the observation well program.

Thermopolis Observation Wells

Two observation wells remain in service in the Thermopolis area, GTW-1 and GTW-3. Site maintenance and data collection activities are conducted by the SEO, data review and publication is performed by U.S. Geological Survey personnel. GTW- 1 observation well has downhole mechanical problems and will be evaluated for rehabilitation or abandonment. GTW-3 well continues to support projects in the Thermopolis area related to the flow of Big Spring and impacts that ground water development may have on that geologic feature.

Albany County Casper Formation Observation Wells

One Cooperative Program and one SEO well are installed in the Laramie area. These wells are completed in and used to track water levels in the Casper Formation. Data from these wells continue to be used as support for ground water development projects in the vicinity.

Laramie, Platte, and Goshen County Observation Wells

Data from these wells are utilized for decision support on issues before the Laramie County, Platte County, and Prairie Center Control Areas as well as tracking of general trend of ground water levels in the respective areas. Previous reports outlined the testing and cooperation of the SEO with the equipment manufacturer to use new technology in our monitoring program. As a result of that work, a Sutron SDR recorder utilizing software for ground water monitoring and a Sutron Monitor recorder and transducer have been installed on a permanent basis in Platte County.

Two wells, Laramie County #15 and CC Meier (the La Grange area of Goshen County) remain in an un-usable state and need rehabilitation, abandonment, and/or replacement.

Continuation of an additional cooperative project between GW, the University of Wyoming/Department of Civil Engineering, and the Wyoming Department of Environmental Quality began in WY-07. This project utilizes data from several monitor wells in Laramie County that will provide a long term dataset to address recharge to the aquifer systems of the area. Wells under this program are owned by the City of Cheyenne, monitoring equipment is

owned by the SEO and operated and maintained by the University of Wyoming-Department of Civil Engineering with funding provided by the Wyoming Department of Environmental Quality.

Prairie Center Control Area and Madison Observation Wells

The Prairie Center Control Area and Madison observation well network is comprised of 32 observation wells. Twenty (20) of the observation wells are equipped with float driven digital water-level recorders. Four (4) of the deeper observation wells have been equipped with pressure-sensing transducers and electronic data recorders. Water levels in 6 wells are measured by hand using steel drop tape, airline systems or pressure gages. The final 2 observation wells are in need of rehabilitation, however funding was not available during WY-08.

WY-08 improvements included the installation of 13 solar panels and replacement of 12 float driven digital water-level recorders as well as 1 electronic data recorder.

Gillette Area Observation and Subdivision Wells

These wells continue to be a source of information related to ground water developments in Campbell County and the City of Gillette. Several wells have been removed from the network by well or land owners and one well, G-Mon-7, remains inactive and in need of rehabilitation, abandonment, and/or relocation. The Jim Kintz well continues to provide spot measurements pending return of the well to production by the well owner. Seven additional solar panels and charge controllers were purchased in WY- 08, 2 have been installed and the remainder will be installed in WY-09.

Data from observation wells and active subdivision production wells in this area were used in WY-08 to address the feasibility of permitting additional appropriations for new subdivision and municipal use and to support actions of the State Engineer on new and existing permits.

Coal Bed Methane Observation Wells

Although CBM development and production slowed in WY-08, it remains a large segment of the mineral extraction industry in the Powder River Basin and other areas of the state.

Data from this series of wells were provided to the Gillette Area Ground Water Monitoring Organization (GAGMO) for modeling efforts, and to the Wyoming Geological Survey under a cooperative project with the SEO to prepare an interactive piezometric head map for the Powder River Basin. Data will be provided to both projects on a continuing basis.

U.S. Geological Survey (USGS) Cooperative Data Program

The Cooperative data program between the SEO and U.S. Geological Survey continues to progress in WY-08. Guidance has been requested from the U.S. Geological Survey on the use of different types of calibration measurement and recording equipment use. A formal guidance document from the U.S. Geological Survey Wyoming Water Resources Division and/or National Ground Water Program continues to be in a pending status. The review and guidance requested from the U.S. Geological Survey has resulted in 6 cooperative ground water sites being placed in a pending status. These 6 sites have remained in the cooperative program budget, but have not been assigned to actual facilities for data collection, analysis, and publication. Cooperation and continuation of a guidance document form the U.S. Geological Survey continued through WY-

08, new sites are expected to fill the vacancies once the detailed guidance is received from the U.S. Geological Survey, Wyoming Water Science Center.

Internet access to cooperative monitor well data products is available at http://waterdata.usgs.gov/nwis/gw

Continuing Monitoring Efforts

As referenced in prior annual reports and previous sections in this report, the observation well network has several wells that are in need of rehabilitation. These wells have been temporarily taken out of service until funding is available for rehabilitation or abandonment. WY-08 resulted in the acquisition of a downhole video camera to evaluate the suitability for rehabilitation or abandonment. That work will begin in WY-09.

Continued changes and additions to this program will be aimed at better serving the needs of the agency and providing support to permitting and management of the ground water resource of the State of Wyoming.

Interference Investigations

U.S. Fish and Wildlife Service - Saratoga Fish Hatchery Interference Investigation

This interference investigation continued through WY-08. For a chronology and description of previous events related to this investigation, the reader is referred to prior annual reports. Compilation of available data products and reference materials is complete. Report preparation and additional analysis of data continued in WY-08. The independent analysis of available data has been reviewed and is being incorporated into the final report for this investigation.

Data, analysis, and report information from the June 2007 Wyoming Water Development Commission (WWDC)-funded ground water exploration project for the Town of Saratoga has been incorporated for review. The final report for the exploration project has added valuable information to the geohydrology of the Saratoga valley and will be incorporated into this interference report.

Additional staff time has been made available in WY-08 for additional review and report preparation and should result in a final report release in early WY-09.

Continuation of WY-06 U.S. Fish and Wildlife Service – Saratoga Fish Hatchery Interference Investigation

A formal interference complaint was filed by the U.S. Fish and Wildlife Service regarding the water rights of the Saratoga National Fish Hatchery and a nearby irrigated agriculture operation in WY-06. The U.S. Fish and Wildlife Service's second interference investigation will proceed once analysis and reporting for the initial interference investigation is completed. Final analysis and report generation for the initial investigation should provide information relative to the interconnection between the irrigation wells in the vicinity, the flow of Lake Creek, and the discharge of Lake Creek Lake (a natural spring with appropriations to serve the U.S.Fish and Wildlife Service – Saratoga Fish Hatchery).

1994 Borie Area Interference Investigation

Previous Annual Reports detail the chronology of events, data collection, and data analysis efforts related to this project. During WY-08, GW staff completed and published a final report entitled "Investigation of a Complaint of Interference to the Cheyenne No. 57 (Weber No. 1) Water Well (Well Registration No. U.W. 13)", which outlines the findings of the State Engineer regarding the relative impacts to the subject well by the exercise of junior ground water appropriations in the area. Approximately 2,500 hours, or 14.5 months of staff time was consumed in data collection, analysis, and presentation tasks related to this one interference project.

Horseshoe Creek Interference Investigation

Previous Annual Reports detail the chronology of events and data collection efforts related to this project. During WY-08, GW staff secured the services of Lidstone and Associates, Inc., a private geo-hydrological consulting firm, to conduct the data analysis efforts related to this project. A final report on this interference investigation will be available in early WY-09.

Current Ground Water Issues

Gillette Water Hauling Activities

The activity of water hauling occurs when water is not available for a necessary purpose at some, often remote, location. The activity typically entails the construction and operation of acentrally located water well from which water is trucked to various locations for any number of uses. The State Engineer has long been reluctant to issue long term permits to authorize this activity, due to the large quantities of water which are typically produced, and the difficulty in tracking where and for what purpose the water is ultimately used.

Water hauling activities have increased in the immediate area of Gillette during the last decade, largely to serve the needs of the industry and construction activities associated with the industry and increasing population in the area. The State Engineer has issued several time-limited permits for water hauling activities in this area during the past decade. Numerous purveyors of water to these industries have invested significant funds and have become dependent on the continued exercise of water rights that are known to be temporary in nature. The vast majority of these purveyors are employing wells completed within the Fort Union Formation, a formation which is also heavily utilized by the vast majority of the residents of Gillette area residents.

During WY-08, the State Engineer was compelled to deny an application submitted by an entity known as WaterCo, LLC who was seeking approval for a water right that would allow continued use of a well completed in the Fort Union Formation for water hauling activities. The majority of the water produced by the well was to be used for hydraulic fracturing of remotely located Coal Bed Methane wells. The State Engineer denied the application because it was determined that to approve the application would not be in the public's water interest, for the following reasons:

- The Fort Union Formation is an important long term source of domestic/drinking water for not only the City of Gillette, but also for thousands of other residents living outside the City in the various subdivisions and Water Districts adjacent to the City of Gillette.

- Several dedicated Fort Union Formation monitoring wells have been constructed in the immediate area of the City of Gillette and have been equipped with continuous water level recording devices. Water level data have also been collected from several subdivision water supply wells in the area since the late 1970's. The data obtained from the monitoring wells and subdivision water supply wells indicate that static water levels in general have declined 100-200 feet in the area since the monitoring wells were completed in 1995. Data also indicate that pumping from the aquifer is exceeding recharge to the aquifer, and the amount of water stored in the aquifer is decreasing.

- The City of Gillette has experienced approximately a 40% increase in the number of service connections supplied by its municipal water system since 2004. There is similar residential growth outside the incorporated boundaries of the City of Gillette. It is obvious that the City of Gillette and the surrounding large subdivisions and Water Districts will continue to see increases in the number of residents who will have to be served by all of these water systems, with a corresponding increase in the amount, in sum total, of water that will be produced from the Fort Union Formation for domestic uses. The increase in overall water use will likely accelerate the rate at which the water in the Fort Union Formation near Gillette is being mined.

- There appear to be other sources available at this time that can provide water for the coalbed methane and construction industry purposes for which the subject application was submitted.

The action of the State Engineer in denying the application was then subjected to review at the May, 2008 meeting of the Board of Control, and the Board ultimately recommended that the State Engineer issue a time-limited permit to authorize this activity for a period of six months. The State Engineer subsequently issued a permit for water hauling activities from this well for a period of six months, which will lapse in early WY-09.

Due to the competing demands placed on the Fort Union Formation, the major source of fresh drinking water and a declining resource at this time, the State Engineer is not inclined to issue permits to authorize water hauling activities from wells completed in the Fort Union Formation in the immediate future.

Hot Springs Area of Concern

The Hot Springs County Commission is concerned about potential impacts to the Big Spring and would like the SEO to establish a control area that would be protective of the Big Spring. During the last several years, GW, the State Engineer, and the Water Division No. 3 Water Superintendent have spent a considerable amount of time trying to impress upon the Commission what a Control Area is designed to accomplish per statute and why a Control Area is not a viable option to rely upon to protect the Big Spring. Staff has also educated the Commission on the responsibility of the appropriator to insure their water right is in order and their responsibility to

collect water level measurement data to effectively document the actual flows of the Big Spring. The application review process established several years ago is still in place. This process allows the Hot Springs County Commissioner to review all Ground Water applications that are received to drill a well within the area of concern and allows the county commissioners to make a recommendation to the SEO concerning the approval and or denial of an application. In WY-08, GW received 4 water well applications located within the Hot Springs Area of Concern. Three of those applications (U.W. 186885, Psalm 107:35, U.W. 18884, Lazy Acres #1, U.W. 189031, Sheep #1) were approved to permit status. The fourth application, T.F. No. U.W. 40-6-442, Enlarged Red Farm #1, Taylor Family Partnership is being held in pending until an acceptable Surface Water Reservoir Application is received.

Water Supply and Water Yield Analysis Plans

The State Engineer is required under Wyoming Statute §35-12-107 to prepare a "Water Supply and Water Yield Analysis" for projects under the jurisdiction of the Industrial Siting Administration which would use 800 acre-feet of water per year or more. The analysis is done to evaluate the adequacy of the proposed water supply for the project and the State Engineer is required to certify the adequacy of this water supply. The procedure requires investigation and review of the proposal, the issuance and publication of a written "Preliminary Opinion", and ultimately, the issuance of a "Final Opinion" by the State Engineer concerning the water supply.

The previous Annual Report outlined the plans of Medicine Bow Fuel and Power to construct a coal mine that will produce approximately 3.2 million tons of coal per year and a coal-to-liquids (CTL) plant that will use the coal to produce approximately 13,000 barrels of diesel fuel per day at a location between Hanna and Elk Mountain.

During WY-08, GW completed the State Engineer's Final Opinion for this project, that based on the available information, sufficient water exists in the Mesaverde aquifer to supply up to 48,000 acre-feet of water to Medicine Bow Fuel and Power's coal mine and CTL plant over a period of 30 years. Plans to drill 12 production wells in order to obtain a total yield of 1,000 gallons per minute are reasonable based on the very limited information obtained from pumping tests of two test wells. If well yields are less than the anticipated 90-100 gal/min, additional wells could be drilled. During WY-08, it became known that the primary product to be created by these companion facilities could ultimately be gasoline, which would be created by a process that would require significantly less overall water use. As such, the Final Opinion is still valid.

The Industrial Siting Administration indicates there are several other imminent projects which will also require water supply and water yield analysis.

Cumulative Hydrologic Impact Assessments (CHIA)

GW staff reviewed the following Cumulative Hydrologic Impact Assessments (CHIA) in WY-08, at the request of the Wyoming Department of Environmental Quality – Land Quality Division:

- "Cumulative Hydrologic Impact Assessment of the Stansbury Coal Mine, Green River Basin, Wyoming", August 28, 2007;
- "Cumulative Hydrologic Impact Assessment of the Carbon Basin Mines, Carbon Basin, Wyoming" , January 29, 2008; and

- Cumulative Hydrologic Impact Assessment of Coal Mining in the Upper Bitter Creek Watershed and Great Divide Basin, Southwestern Wyoming" , August 19, 2008.

Water Well Minimum Construction Standards

With the addition of new staff in WY-08, efforts were renewed to revise and expand the draft Water Well Minimum Construction Standards for private water supply wells (construction standards for public water supply wells are under the jurisdiction of the Wyoming Department of Environmental Quality). Advances in water well construction technology, water well construction materials and a general awareness concerning waterborne disease and water quality characteristics dictated the revisions. Draft construction standards should be complete and available for public review in early WY-09.

Rules and Regulations

Concentrated efforts at revising the GW Division's Rules and Regulations (1974) commenced in WY-07. There have been many changes in the types of uses of water and in the manner in which water may be used for the production of other resources, necessitating the need for revised rules. There have also been many advances in the manner in which business is conducted through internet technology; surveys are performed through global positioning techniques; maps are created through computer aided drafting; money is transferred through internet transactions – all of these issues must be addressed in specific terms in the revision of the Rules and Regulations. Throughout this process, the intent of the laws that protect the priority system must be maintained. The "first in time, first in right" concept must be defined when the possibility exists that applications may be submitted in different formats; either through e-mail or hard copies through the U.S. Postal Service.

The extent of work required to update the rules was fully realized when GW staff had to prepare a typed version of the original rules from which to make changes, since an original electronic copy did not exist. Draft rules and regulations should be complete and available for public review in WY-09.

Ground Water Management Strategy

As noted in the "Objectives" portion of this report, GW's responsibilities include protecting the State's ground water resources. On October 27, 2005, the State Engineer gave a PowerPoint® presentation to the Joint Agriculture, Public Lands and Water Resources Interim Committee in Powell, Wyoming, entitled, "Challenges Ahead: Effectively Managing Wyoming's Ground Water Resources". The ensuing discussion centered around current ground water management issues facing the SEO, the need for the SEO to take a proactive stance relative to ground water management, and the need to develop the management tools necessary to effectively manage Wyoming's ground water resources. Developing an effective ground water management strategy for the state is not a luxury, but a long overdue necessity. Finding the time and resources to launch such an ambitious project, on top of our statutorily mandated duties, is an issue with which GW struggles. Of larger import is the lack of hard data on which to make such determinations.

Legal Actions

GW staff spent a considerable amount of time in WY-08 responding to several legal actions, including gathering documents, organizing files, responding to attorneys, and preparing responses to interrogatories. Two civil actions against the State Engineer went unresolved in WY-08:

- a Civil Action (No. 170-63) filed by William F. West Ranch, LLC, L.J. Turner, Karen Turner, Wendy Turner, Jennifer Turner, and Michael Turner vs. Patrick Tyrrell, Wyoming State Engineer and the Wyoming Board of Control;
- a Civil Action (Civil No. 87-611-V) filed by Kara Brighton on behalf of the Rivetts, "In the Matter of the Decision of the State Engineer Denying Appeal of Decision of Superintendent of Water Division 1, Issued on June 12, 2007".

One civil action against the State Engineer was dismissed:

- a Civil Action (Civil No. CV-2007-0045) filed by M & M Ranch Acquisition Co., and T Cross T Ranch, LLC vs. Wyoming State Engineer ("In the Matter of the Application for Issuance of permit to Appropriate Underground Water, T.F. UW 39-5-216 ("Application"), Permit No. 180348, ("Permit") Issued and Approved on March 27, 2007").

Ground Water Advisory Committees

W.S. 41-3-908 requires one division advisory committee on underground water for each water division of the state. Each committee consists of three persons, appointed by the Governor, who represent the landowners and water users of the division, geographical areas of the division, and public interest. Committee members are appointed for 6-year terms.

Duties of the Ground Water Advisory Committees include:

- Call/supervise election of control area advisory board members;
- Assist/advise State Engineer and the Board of Control on policies affecting ground water – assistance/advice should consider both the interests of ground water users and the general public;
- Assist/advise state engineer and superintendents in solving ground water problems as they arise within the Division;
- Assist/advise the Control Area Advisory Boards – particularly in the development of control measures which are recommended to the State Engineer for adoption; and
- Provide information to ground water users within the Division relative to the State Engineer's and Board of Control's policies and procedures which affect the use of ground water.

The Committees met as a whole in December 2007. Several vacancies on the Ground Water Advisory Committees were created when members' terms expired. GW's recruiting campaign was marginally successful in generating interest from new members. Governor Freudenthal appointed Michael Sweat (Cheyenne) , Jerry Bush (Beulah) and Dan Wychgram (Thermopolis) as new members in WY-08.

Changes in Ground Water Staff

GW experienced many changes in WY-08, including:

Promotions

- *Polly Helzer's* position was successfully reclassified from an Administrative Specialist 4 position to an Administrative Specialist 3 position in April 2008.

- *Beth Tebben* was promoted from a Water Management Specialist 2 position to a Water Management Specialist 1 position in September 2008. Beth has been with GW since December 2004 and has developed a program to track water right adjudications and has had great success in obtaining compliance from reticent ground water appropriators who have not adjudicated their water rights in a timely manner.

Moved On

- *Tom Johnson*, Water Management Specialist 2, returned to Washington state on November 30, 2007.

- *Polly Helzer*, Administrative Specialist 3, left June 30, 2008 for a position that will utilize her law-enforcement background.

New Additions

- *Brad Faigl* accepted a position as Water Management Specialist 2 on December 6, 2007. Brad had previously worked for the Surface Water Division and fit quickly and easily in GW. Brad died March 31, 2008 at the age of 37. He was a delightful addition to our staff – both professionally and personally - and will be missed.

- *James Neely* accepted a Water Management Specialist 2 position on March 17, 2008. James has a B.S. in Environmental Geology/Geohydrology with a minor in Environment and Natural Resources from the University of Wyoming. James' experience includes monitoring CBM wells throughout the state for Well Dog, and working as a water quality testing equipment rental/service technician for In-Situ, Inc..

- *Nicholas Leventis* accepted a Water Management Specialist 2 position on May 19, 2008. Nick has a B.S. in Geology from the University of Wyoming. Nick's experience includes working as an environmental scientist for Terracon Consultants and serving as a field engineer for Baker Hughes Inteq.

- *Ryan Anderson* accepted GW's Administrative Specialist 3 position, moving over from the Surface Water Division on September 1, 2008. Ryan's skill is greatly appreciated as she has been instrumental in inputting permit application information into e-permit.

- *George Moser* accepted a Water Management Specialist 2 position on September 15, 2008. George has a B.S. in Geology from Iowa State University of Science and Technology. George was a geologist for Trihydro Corporation for two years prior to joining GW.

- *Benjamin Running* accepted a Water Management Specialist 2 position on September 29, 2008. Benjamin has a B.S. from the University of Wisconsin-Eau Claire in Environmental Geology. Ben previously worked for the North Carolina Department of Environment and Natural Resources as a hydrogeologic technician, collecting ground water levels and overseeing the installation of monitoring wells.

Thanks to the 2007 Legislature, GW obtained two additional staff positions; a Water Management Specialist 1 and Water Management Specialist 2. The two staff positions will work directly with CBM issues, as well as assist in addressing the current backlog of work and current and future ground water issues as they present themselves.

Continuation of the IT Initiative

- The IT Initiative continues to move forward. Since Weston Solutions is working out of Seattle, and India, it may appear that not much is going on; however, Ground Water has been working diligently with Weston via telephone and e-mail to develop an e-permitting system for U.W 5's, 6's and 8's.

- In early September 2008, Ground Water went "live" with the first stage of e-permit. All new applications received are being entered by Ground Water staff into e-permit, where the applications are accepted, assigned, processed and approved by various staff members. This allowed Ground Water to thoroughly test e-permit. Corrections, enhancements, improvements, suggestions, clarifications, etc. have been made to e-permit as a consequence.

- We continued the inputting of the applications into both Access and e-permit. This process caused the Ground Water Division to fall way behind in the data entry of new applications. An evaluation of this procedure is underway to determine a course of action to streamline and change the data entry process.

- In the next Water Year it is anticipated that Ground Water will complete testing of all aspects of e-permit and be able to move forward with taking e-permit live to the public.

COOPERATIVE PROGRAMS SECTION

By
Mike Ebsen, Cooperative Programs Coordinator

The Cooperative Programs Section coordinates three ongoing programs and provides technical support in other areas as assigned. The primary objectives of each program are as follows:

Objectives

1. The objective of the Surface and Ground Water Data Program is to provide the State Engineer, other state, local and federal agencies, and all other water users with quality, legally acceptable, hydrologic information for use in crop and other water use planning. This includes regulation, compact administration and the technical analyses required in water related litigation.

The program also aids in flood plain planning and flood warning, water quality monitoring and various other related activities. Continued involvement in this investigation and surveillance activity allows the State Engineer to more effectively address current state priorities as well as gather baseline information as issues evolve.

2. The objective of the Snow Survey and Stream Flow Forecast Program has been and remains to provide current information for the State Engineer and all water users, managers, and planners on seasonal mountain snowpack accumulations as the season progresses, and the ensuing projected snowmelt stream flows prior to runoff. This information in turn assists water users in realizing the maximum and most efficient service from this limited and transient resource.

3. The objective of the Water Supply Adequacy Program is to identify water right issues associated with county subdivision permit applications that have been submitted by the Department of Environmental Quality for State Engineer review, and to comment within the time period specified by the Department, including the maintenance of associated records.

SURFACE AND GROUND WATER DATA PROGRAM

Accomplishments

A significant portion of the funding for this Program has historically been provided through cost share agreements between the State Engineer and other entities, including the U.S. Geological Survey, the United States Bureau of Reclamation (USBR), the United States Natural Resources Conservation Service (NRCS), and the United States Bureau of Land Management (BLM); as well as various State, County and Local entities. An open and sociable line of communication among agencies is a noteworthy accomplishment.

Cooperative Stream Gage Activities

Accomplishments involving State Engineer personnel working in the surface water data area include the day-to-day operation, maintenance and/or monitoring of numerous administrative data stations and sites, including the 54 surface stream gage sites currently being operated in the statewide U.S. Geological Survey - Wyoming District cooperative network. Other agency and private sector cooperators also assist in this effort; an example of which is the Basin Electric Power Cooperative, which assists in the funding of stream flow data collection on the Laramie River, near Grayrocks Reservoir. The 2008 water year was again busy for the field staff and their efforts are appreciated.

Activities include regular measurements at the various sites, and communicating essential information to the appropriate parties as the season progresses. Detailed records of stream flows, ditch diversions and reservoir stage are gathered, analyzed, and computed. Reconnaissance, safety inspections, and other work are provided. Water use data is collected, assembled and transmitted for inclusion in the records. Worn equipment or instrumentation components are repaired or replaced. Shelters are painted and patched, walkways and cableways are tested and repaired, and riprap is placed around gage houses, stream banks and damaged artificial controls. Maintenance around the state ranges from repairs resulting from the acts of vandals; to acts of Mother Nature and Father Time.

Gage Upgrade Activities

The SEO and the U.S. Bureau of Reclamation (USBR) - Mills Office have recently concluded a project involving the replacement, repair, and rehabilitation of select stream gage stations within the region east of the continental divide. Activities included the installation of new instrument shelters, the construction or rehabilitation of cableways, the installation of artificial control structures, and the upgrading of select sites of mutual interest with new and improved instrumentation. A historic perspective of these Mills Office activities can be found in previous reports.

Also worthy of note are efforts on the Bear River by SEO staff in cooperation with the USBR – Provo Office, to install real-time telemetry at canal diversion sites along this interstate river system. The states of Wyoming, Idaho, and Utah each entered into individual agreements with the USBR; Wyoming being the largest co-operator in this basin wide effort. These activities have been discussed previously and in more detail in the Field Reports section of this Annual Report Series under the Superintendent's Report for Water Division Number 4. Further information and data can also be viewed at the following web location: http://bearriverbasin.org/.

These and similar activities have kept State Engineer field staff busy, and their efforts are truly appreciated. These type upgrade efforts continue to conserve water, more efficiently distribute the available supply, shorten response times, and provide safer working conditions for State Engineer field personnel.

Bear River Compact Stream Gage Activities

The State Engineer continues to participate in the surveillance of the water resources of the Bear River basin in the states of Utah, Idaho, and Wyoming through the Bear River Commission, as provided for in the Bear River Compact. The states of Utah and Idaho also participate at the same funding level as Wyoming for their portion of this activity, which is handled through the Utah District Office of the U.S. Geological Survey.

Yellowstone River Compact Stream Gage Activities

The State Engineer continues to participate in the surveillance of the water resources of the Yellowstone River basin in the states of Montana and Wyoming, as provided for in the Yellowstone River Compact. The state of Montana also participates at the same funding level as Wyoming for their portion of this activity, which is handled through the Montana District Office of the U.S. Geological Survey.

Belle Fourche River Compact Stream Gage Activities

The State Engineer continues to participate in the surveillance of the water resources of the Belle Fourche River basin, as provided for in the Belle Fourche River Compact. The state of South Dakota also participates at the same funding level as Wyoming for their portion of this activity, which is handled through the South Dakota District Office of the U.S. Geological Survey.

Monitor Well Measurement Activities

Accomplishments involving State Engineer personnel in the ground water data area include the day-to-day operation, maintenance and/or monitoring of the 52 observation wells in the U.S. Geological Survey cooperative network, as well as 213 State Engineer sites throughout the state. Activities include repairing or replacing worn equipment or instrumentation components. Many of these wells are equipped with float driven digital water-level recorders. However, some wells, including several artesian wells, are equipped with pressure-sensing transducers and electronic data recorders. The remaining wells are measured periodically by hand using a steel drop tape, or airline systems. More detailed information on this activity can be located in the Ground Water Section of this report.

Other Data Activities

Other surveillance and investigation activities are conducted solely by State Engineer personnel for various administrative purposes, and are beyond the scope of the multi-participant cooperative activities outlined above. However, these efforts also provide compiled data on stream flow, reservoir storage and river diversions. One example of these compilations is the Hydrographers' Annual Report series.

Areal Study Activities

The State Engineer and the U.S. Geological Survey have a long history of cooperation, which has provided an extensive list of water resource investigation products. These products catalog Wyoming's water resources on a basin-wide, a county-wide, or a more local scale. During WY-08, the GW Division contracted with the U.S. Geological Survey to investigate the "physical and chemical hydrogeologic characteristics and generalized potentiometric surface of the high plains aquifer in Laramie County, Wyoming". Many hydrogeologic investigations have been conducted to characterize the physical and hydraulic properties of the High Plains aquifer in Laramie County. Surprisingly, very few of the wells drilled in Laramie County and in the vicinity of Cheyenne have detailed quantitative descriptions of lithology or quantitative characterization of the physical and chemical properties of the geologic units comprising the aquifer in this area. This information is needed to improve our understanding of this critically important aquifer undergoing rapid development. Information describing ground water recharge to the High Plains aquifer in southeast Wyoming is also severely lacking. With the exception of estimates by Morgan (1949), very little quantitative information is available, and most available information consists of estimates from large regional studies of the aquifer by the U.S. Geological Survey. Additional information describing ground water recharge to the High Plains aquifer in southeast Wyoming is much needed. Two county-specific potentiometric surfaces have been constructed in the past for the High Plains aquifer in Laramie County (Lowry and Crist, 1967; Crist, 1980). The most recent of these two county-specific potentiometric surfaces was constructed by the U.S. Geological Survey using water levels measured more than 30 years ago in March 1977 by U.S. Geological Survey and State Engineer Office staff (Crist, 1980). A new potentiometric surface, reflecting current conditions (2009 or 2010), is much needed and will give all interested parties an "up-todate" understanding of current aquifer conditions.

Problem Areas and Recommendations

As statewide water planning efforts proceed; the demand for water and its proper administration continues to increase. Changes in the uses of water as well as changes in water usage patterns; along with the resulting conflicts have and will continue to occur. Those involved in resolving these complex issues request increasingly sophisticated information, often on a real time basis. Additionally, information to support informed water resource planning decisions often requires many years of records.

Compounding these concerns is the ever increasing annual operational cost associated with continuing to provide basic levels of data through these cooperative programs. A historic perspective of these funding factors can be found in previous reports. However, several hard to quantify factors are always involved; one being the real value of the cost share dollars that are offered, another being the trend toward increased State Engineer cost proportions.

One method of mitigating these data availability concerns has been to shift appropriate data collection sites between co-op and State Engineer program operation. The net result has been that SEO personnel are shouldering increasing proportions of this data acquisition work. This practice has also brought with it a new series of issues difficult to evaluate including Federal/State relations, site/component ownership and maintenance responsibilities, and liability concerns.
One example of an effort to moderate this increased workload is the investment in automated consumptive use equipment, currently being installed in the Green River Basin. Tasks under this program include the automation and/or installation of over 100 stream and diversion measuring sites, five weather stations, two energy flux towers and remote sensed estimates of basin wide evapotranspiration. Data sites are being connected to a radio telemetry network to provide real time availability. For additional details, see the "Colorado River Compacts Administration Program" section of the Interstate Streams portion of this report.

Greater data acquisition responsibilities in turn bring increased equipment failure, site maintenance and personnel safety concerns. It is increasingly difficult to keep such basic items as spare equipment on hand; either the newer electronic, or conventional equipment. To meet the increasing need to maintain, upgrade and automate essential administrative sites in existing SEO and co-op data networks, an ongoing and expanded commitment of resources will be required. A noteworthy undertaking that carries with it ongoing equipment, maintenance, and safety uncertainties, is the GOES satellite data network discussed in detail in the "Water Division III" section of the Division Superintendents portion of this report.

Additionally, a gage house and cableway inspection effort conducted this summer revealed several recurring areas where safety and reliability concerns were observed at many of the sites visited - outside of the instrumentation concerns discussed above. As personnel safety is of primary concern, preliminarily direction has been given toward replacing, rather than repairing affected components. To this end, a more comprehensive inventory of sites and associated component cost estimations is underway.

Other problems including damages associated with vandalism are an ongoing concern; but damage tends to occur only at certain problem sites, and appears a component cost of doing this

kind of work. Also repair costs, as well as timely product repair and product support from instrumentation and software vendors continues to be of concern; but the solution may lie in selecting new instrumentation vendors when the opportunity to replace these gage components and software arise.

SNOW SURVEY AND STREAMFLOW FORECAST PROGRAM

Accomplishments

Participants include Natural Resources Conservation Service (NRCS) personnel, State Engineers Office (SEO) personnel, and others. Surveys are conducted during the last week of each month and the results are presented four times each year, beginning February 1st and continuing until May 1st, for the 66 manually measured snow courses, and daily at the 80 automated SNOTEL sites in Wyoming. Snow survey personnel manually measure snow depth and density, as well as provide winter maintenance on SNOTEL sites throughout Wyoming on an as needed basis. The repair of SNOTEL sites and measurement of snow pack often require snow survey personnel to travel to remote locations under potentially adverse conditions. For these reasons participants are required to complete special training in snow survey and snow survival techniques, maintain current first aid and CPR certifications, and undergo annual physical exams.

SNOTEL sites are automated; radio-telemetered, snow pack data collection sites and are generally located in remote, yet hydrologically significant areas throughout Wyoming. These sites provide equivalent water depth of the snow pack (SWE), as well as precipitation, air temperature, and in some cases soil moisture and temperature. The number of SNOTEL sites that measure snow depth was recently increased to 55. SNOTEL sites electronically relay data, at regular intervals, to a central collection point in Portland, Oregon. Data is then available to users via a modem or the Internet. A direct link to this data has also been provided from the State Engineer's Internet home page. Data can be collected at almost any interval, but are generally collected at four to six hour intervals. Data collected once each day are normally adequate for water supply forecasting, but avalanche forecasting and other recreational users may need the data on a more frequent basis. Each SNOTEL site has the capability of handling up to 64 sensors. As more sites are added, and the confidence level of data collected with SNOTEL sites improves, labor intensive manual snow measurements will be reduced.

Stream flow forecasts are the end result of these snow data collection efforts, and have been proven a valuable tool for those involved in water management and planning. Stream flow forecasts are currently available at 54 locations in Wyoming. Flows at these sites are forecast six (6) times per year beginning January 1 and ending on June 1. Virtually all of these stream flow prediction sites have been selected as the direct result of input from local water users. These sites require the presence of an active stream gage at or near the forecast site to calibrate and refine the prediction models. Complex planning issues involving all areas of the public and private sectors including the administration of interstate compacts and court decrees, flood forecasting, reservoir carryover storage, in-stream flow, and power generation all require information in advance of the runoff season to be proficiently addressed. Decisions in areas including agriculture, industry, and municipal water supply are simplified through the availability of these forecasts. The State Engineer again contributed $2,000 to this program, in addition to personnel and equipment, to aid in the collection of snow survey data.

Problem Areas and Recommendations

Because of innate fluctuations in snow pack measurements, and the effects of weather patterns prior to and during the measurement and runoff periods, snow surveying and stream flow forecasting remain an inherently inexact science. Even so, network and equipment refinements continue to evolve. Replacing manual snow courses with SNOTEL stations and adding additional equipment such as snow depth, soil moisture and evaporation loss sensors would provide improved and almost continuous forecasting capabilities. As funds become available, snow depth sensors are being added to the system by the NRCS.

The NRCS and the State Climatologist, with input from the State Engineers Office and others, are cooperating to upgrade and/or instrument new sites throughout the state with SNOTEL capabilities. Currently, six sites have been proposed; five existing snow course upgrades and one new site on the reservation above Riverton. These efforts promise to enhance data collection and improve stream flow prediction capabilities.

Certain instrumentation components continue to exhibit some degree of unreliability and may require additional site visits to verify that these sites are operating optimally. Therefore, annual snow survey coordination meetings are held every fall in an attempt to recognize, identify and plan how these and other concerns are to be dealt with, prior to the onset of the snow season.

This year two SEO candidates were to attend the formal West Wide Snow Survey and Survival Training held in Trinidad, Colorado the week of January 14-18. The NRCS, Casper Office, also put together a special in-state snow survey refresher course for the 'old hands' in the program; many thanks to Terry Gonzales for his efforts.

Personnel reassignments and retirements periodically impact snow survey activities. Typically a nearby trained snow surveyor will 'stand by' and assist in areas where they normally may have no involvement, while a new snow surveyor obtains the required training and certifications. Of note are the four surveyors and two sleds the SEO is providing for Saratoga's Medicine Bow and Sierra Madre runs. These sleds have a lot of miles on them and should be replaced within the next few years.

SEO personnel and others, should recognize and focus on how changes in funding, personnel, and activities within other water data programs (i.e. stream gage discountenances) have and may continue to adversely impact related activities (such as stream flow predictions) in this and other programs. The State Engineer therefore must carefully weigh potential impacts, including impacts on related programs, in the resource allocation process.

SUBDIVISION WATER SUPPLY ADEQUACY

Accomplishments involving Existing Water Rights

Wyoming Statute 18-5-306 (a) (xi) provides for the disposition of any water rights appurtenant to the lands involved in a proposed subdivision development prior to its approval by county officials. Original State Engineer involvement under this statute began in 1980. Effective January 1, 2006 all in depth reviews associated with this type of submittal have been turned over to the Board of Control Division of the State Engineers Office. However, it remains necessary to correlate this Board of Control Division activity, with Ground Water Division activity associated with proposed subdivision water supply, to meet comprehensive Agency subdivision review obligations

To meet this obligation, a total of 103 subdivision review submittals were logged and tracked during the report year. Of these submittals, 53 Board of Control Division water rights distribution plan review notifications are not currently associated with a Department of Environmental Quality proposed water supply adequacy review request.

Accomplishments involving Proposed Water Supplies

More recent State Engineer involvement under this statute, concerning the adequacy of a subdivision's proposed water supply, first became effective in July of 1997. Past reports discuss how this original legislation has been amended. Current State Engineer responsibilities in this new area are outlined under Wyoming Statute 18-5-306 (c) (i). These review responsibilities remain with the Ground Water Division.

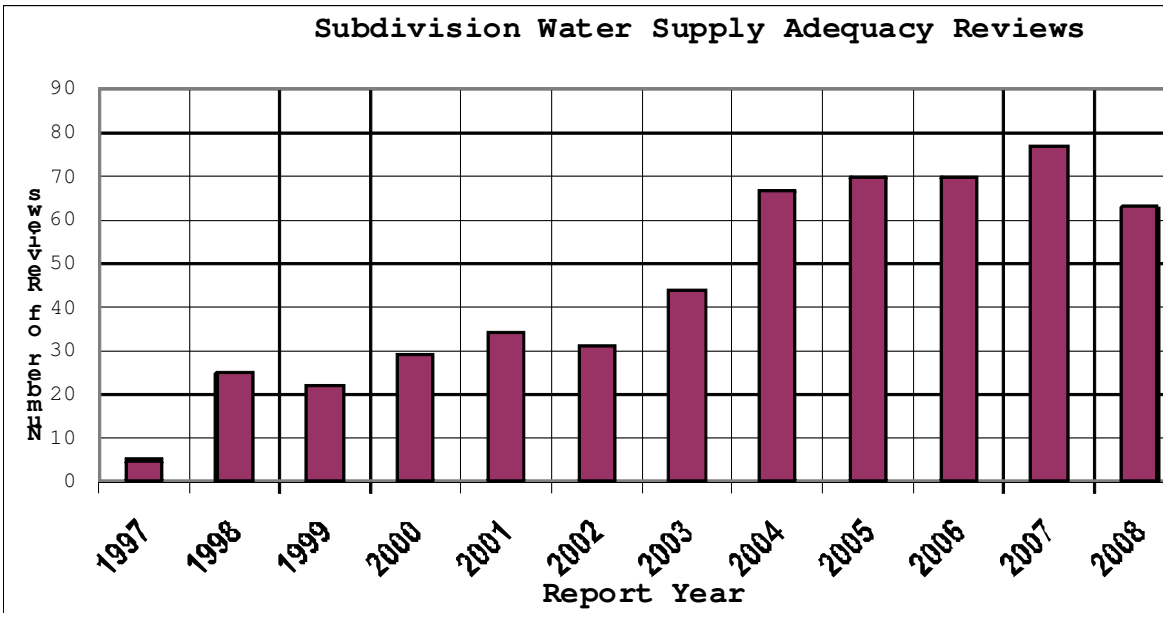
Basically, the State of Wyoming's Department of Environmental Quality (DEQ) may request assistance from the State Engineer, and the SEO is to fully cooperate to the extent possible and is to furnish the information or recommendations requested within the time period specified by the Department. Typically DEQ does request that SEO determine if water right issues have been addressed.

To determine what water right issues may be associated with the development of a proposed subdivision, a preliminary search of the State Engineer's records on lands in the area of the proposed subdivision is conducted and potential existing water right concerns, as well as concerns associated with the new subdivision's proposed water supply are identified.

Based on the issues as identified in the DEQ submittal, and the SEO preliminary search results, appropriate water right actions are proposed. This may involve coordinating appropriate Surface Water Division, Ground Water Division, and/or Board of Control Division input.

Since the original enactment of this legislation in 1997, the State Engineer has provided DEQ with review comments and follow-up reviews as requested. This obligation also requires staff time to be committed to participating in meetings, City/County outreach efforts, conferences, and associated activities. Also worth repeating is the recent decision on the part of DEQ to shift Department review responsibilities from the Main Office in Cheyenne, to the various District

Offices throughout the State.



NOTE: All years through 2003 are reported as reviews per Calendar Year, 2004 and subsequent years are reported as reviews per water year.

Problem Areas and Recommendations

A review of the tracking process associated with the Agency's existing water right review obligations indicates that the number of reviews associated with this activity may be stabilizing. Additionally, the recent division of the review tasks between the Board of Control and the Ground Water Divisions has resulted in more timely subdivision reviews and a more manageable program workload.

With the advent and implementation of the more recent subdivision water supply legislation, which is now the Ground Water Divisions' primary involvement, compliance appears to be improving. Contributing to this problem is the practice on the part of DEQ, to favorably comment to County Planning entities regarding water supply adequacy, prior to State Engineer review and resolution of water right concerns.

The program workload associated with subdivision water supply adequacy responsibilities appears to also be stabilizing, allowing other backlogs associated with other programs coordinated under this section to take priority.

BOARD OF CONTROL DIVISION

The Board of Control is comprised of two (2) sections: the Board of Control Section and the Water Division No. III - General Adjudication Section. The two (2) sections under this Division are incorporated within this Board of Control Division Report.

BOARD OF CONTROL SECTION

by

Allan Cunningham, Adjudication Officer
Board of Control Division

Objectives

1. To promptly process petitions to amend adjudicated water rights and to present these petitions for review and consideration by the Board of Control.

2. To promptly review within 30 days water distribution plans and/or authorizations for detachment of water for consideration by the State Engineer or the Board of Control.

3. To promptly process proofs of appropriation for new adjudications and to present these proofs for review and consideration by the Board of Control.

4. To maintain and update the status of all adjudicated water right records to accurately reflect their current status.

5. To continuously evaluate the productivity of staff efforts in addressing the current workload.

6. To respond to inquiries by the public, as well as State and Federal agencies, regarding the current status of adjudicated water rights, and to give instructions and assist appropriators on the methods, procedures and format for filing petitions, plans and authorizations for detachment with the Board of Control.

7. To provide technical and administrative support to the Board of Control members in matters concerning the evaluation of both surface and ground water rights and water administration.

8. To prepare and forward proofs of appropriation for surface and ground water uses to the Division Superintendents for field processing and recommendation.

9. To comply with statutory requirements and publish a tabulation of adjudicated water rights for the four (4) Water Divisions.

Major Accomplishments

During this reporting period (October 1, 2007 to September 30, 2008), the Board of Control Division received 272 petitions, an increase of 60 petitions or 28%, from throughout the State in addition to those already on the agenda. These new petitions are listed by division as follows:

	SURFACE	GROUND	TOTAL
DIVISION NO. 1	40	61	101
DIVISION NO. 2	33	7	40
DIVISION NO. 3	52	11	63
DIVISION NO. 4	67	1	68
TOTAL	192	80	272

Final action was taken on 246 petitions, which were either granted, denied, dismissed or withdrawn. Some of the petitions were carried over from the previous reporting period to allow for the resolution of technical, engineering and legal problems, and in some cases for public hearings. The petitions dealt with by the Board of Control ranged from those with simple issues such as a change of point of diversion to those of a more complex nature such as change of use and declaration of abandonment.

Four hundred forty one (441) proofs of appropriation were approved by the Board of Control during this reporting period. Two hundred fourteen (214) or 49% of these proofs were for ground water rights (wells), and two hundred twenty seven (227) or 51% were for surface water rights. In addition to these 441 proofs, 171 stock reservoirs were inspected and found to be constructed within the terms of the permit. Under existing Board of Control policy, these stock reservoir permits will be finalized, and a notation made in the water rights tabulation books, but no certificate of construction issued.

During this reporting period, the number of final actions concerning petitions increased by 62 petitions or 37%. During this reporting period, the number of proofs of appropriations approved increased by 68 proofs or an increase of 18%. The number of stock reservoirs inspected and found to be constructed within the terms of the permit increased by 67 facilities or an increase of 64%.

During the reporting period, four hundred fifty eight (458) new certificates of appropriation or construction were issued as a result of adjudications, an increase of 144 certificates or 46%, and forty eight (48) amended certificates of appropriation or construction were issued as a result of petitions.

During this reporting period, the Board of Control Division Adjudication Team consisting of three (3) technicians for adjudications and the backlog of proofs continued to process proofs and prepare the advertising all surface water proofs for the division superintendents.

During this reporting period, the Tab Book Team continued to oversee the work of the Tab Book information to assure that the Division achieves its goal in publishing Tab Books in a

timely manner. During this reporting period, a draft tabulation of the Tab Book for Water Division No. IV was completed by the Tab Book Team prior to data migration.

Fifty three (53) water distribution plans and/or authorizations for detachment of water were received during this reporting period, an increase of 2 plans and/or authorizations or a 4% increase from the previous reporting period.

During the reporting period, the State Engineer's Office assisted by its consultant, Weston Solutions, in developing and implementing the SEO IT Initiative The State Board of Control Division through Weston Solutions has continued to participate in a business process review identifying its business process, workflow, and data handling points. This development and implementation has greatly diverted staff time and resources from other assigned tasks.

Problem Areas

Wyoming Statute 41-4-208, 1977, requires that the Board of Control compile and edit revised tabulations of adjudicated water rights for all four (4) water divisions of the State. There is a constant demand for these tabulations from engineers, land surveyors, government agencies, and the public. The creation of the new Tabulations of Adjudicated Water Rights is being done using the State Engineer's Office water right database. Once the SEO Database is migrated to the new proposed e-Permit Database, we will attempt to print a new Tab Book for Water Division No. IV. Hopefully through the SEO IT Initiative, publication of these tabulations will be become more frequent and timely.

The technical staff continues to strive for a complete comprehensive review that each petition, water distribution plan and authorization for detachment of water deserve. Computer technology has been a great asset in assisting the Board's staff in developing ways of doing more with less. Applications such as word processing and report keeping have made positive strides toward greater effectiveness and production due in large part to the utilization of the computer to its capacity. Although better and faster computers are making some procedures more efficient, ultimately the computer cannot replace the analysis and research capabilities performed by the technical staff. Due to the increasing number of petitions, water distribution plans and authorizations for detachment of water the technical staff's time is entirely dedicated to these related activities. Through the SEO IT Initiative, it is hoped that streamlining of Board processes will make time available for cross training or training of new tasks allowing the Division staff to grow within the Division.

Wyoming is in a multi-year drought period, and because of this drought, focus of the Board of Control has sifted to water administration from adjudication. As a result, there is a backlog of pending proofs and no dedicated plan is in place to decrease the backlog.

While the concept of removing "paper water rights" from the Agency's records has been around for a long time, and would be both beneficial and in keeping with the multiple facets of our Agency's mission and responsibilities, efforts that have begun with good

intentions have been redirected by other demands placed on the Agency due to higher priority issues. Any effort in the future undertaken to deal with "paper water rights" should be solely dedicated to the task without interruption of external influences.

Recommendations

Develop and implement a unified Board of Control plan to reduce the backlog of proofs. The plan should:

- Set priorities to complete the oldest proofs first and those proofs with funds already paid to the Agency;
- Once current, establish a maintenance plan to keep the backlog of proofs to no more than six (6) months old;
- Change the Board's policy from reviewing proofs twice per year and alternating between surface and ground water to reviewing both surface water and ground water proofs at every quarterly meeting until the proof backlog is reduced significally;
- Dedicate the Division's Adjudication Team solely to adjudications and the backlog of proofs to assure that internal and external issues do not influence the existing workload within the Team

Develop and implement a unified Agency plan to address "paper water rights." The Agency's current database will be migrated into a new database sometime during the next reporting period. There is an urgent need to proof the new database once migration is completed. A Database Team needs to be developed within the Agency with the sole responsibility of correcting the Agency's database. This Agency will be need to dedicate at least six (6) technical positions full time with one (1) Support Services' position to serve as liaison to a Database Team to fully correct the new database in the shortest possible time. The BOC Division suggests that two (2) tech positions from the Board of Control Division, Surface Water Division and Ground Water Division comprise the Database Team. This Database Team will solely perform database correction tasks until the new database is completely corrected. This Team should have the sole "rights" to correct the new database. All other Agency personnel should not have "rights" to correct the new database. This Database Team will need to have a deep understanding of water rights and the e-permit system (future changes to the new database will only be performed through e-permit). Upon its initial formation, this Team will need to set Agency-wide standards and/or criteria for proofing the new database. This Division foresees that the proposed dedication of our resources will have a profound impact on this Agency's constitutional duties. It will slow our response time in processing applications, petitions, water distribution plans, authorizations for detachment of water and adjudications. This Division would expect that it will increase the backlog in all divisions. Ideally, if this task could be outsourced there would no drain on Agency's resources, but recruitment of people knowledgeable in both water rights and e-permit would be problematic. Also, dedicating Agency personnel to this task part-time would lengthen the completion of this task. Over the last 30 years this Agency has performed corrections to the database on a part-time or as needed basis and we have failed to make any significant impact on our old database.

Before we can commence a total review of the Agency's new database, a necessary prerequisite to any review of the new database to correct errors is the complete scanning of all certificates and permits of this Agency.

BIG HORN RIVER GENERAL ADJUDICATION

By
Nancy D. McCann
Water Manager

W.S. 1-37-106, General Adjudication Statute, gave authorization to initiate the process through a judicial determination of the rights to use water of all persons on any river system. Subsequently in 1977, the State filed suit for the determination of water rights in the Big Horn River system and all other sources. This lawsuit is known as the Big Horn River General Adjudication and is under the jurisdiction of the Fifth Judicial District in Worland.

The staff continues to serve as technical arm to the district court on all phases of the case. Some of the staff's tasks are ordered by the court while others are necessary functions to maintain proper records at the State Engineers Office (e.g., incorporating decreed rights). As each decision is handed down, there continues to be numerous technical or administrative tasks that must be accomplished to integrate the decisions into the agency records and the county records.

What lies before us

The judicial decisions have set off, and will continue to necessitate, an extraordinary amount of administrative and technical activities that the court requires of the state to undertake at its own expense. We anticipate resolving what issues can be worked out between the parties and to let the unresolved issues move through litigation in the future.

Phase I Decrees

- Tribal Reserved Rights
- Consent Decree/Appurtenancy of the Tribal Reserved Rights
- Walton Rights
- Tribal Ground Water Quantification

The results of these Phase I decrees require correction and updates of state records, recording the "permanent rights" at county offices, and database modifications. A process for the final integration into the SEO records will be developed and made available to the agency along with training in the next biennium.

Phase II Decree - Federal (non-Indian) Reserved Water Rights

Phase II Interlocutory Decree was entered by the District Court on November 29, 2005. No further activity is anticipated except integration into the agency records during the next biennium.

Phase III - Surface Water Rights

Using the 1997 amended Court procedures; the staff continues the comprehensive review of all unadjudicated State water rights in Water Division III. Over 4000 surface water permits have gone through the court process. Two permits remain to be completed under the court procedures. Objections to the staff's recommendations are filed with the District Court. Resolving those objections on files previously submitted to the court continue to demand a significant amount of staff time to provide technical water rights assistance to the legal team. Detailed field inspections included comprehensive analysis of the water rights, obtaining current ownership information from the county, and then conducting on-the-ground inspections with individual appropriators or administrative entity such as an irrigation district or a ditch company. We anticipate a few reinspections may become needed to resolve objections by the appropriator and other clarification issues to further clarify questions on previous inspections.

The staff held meetings during this reporting period with water appropriators, irrigation districts to explain the Big Horn Adjudication process along with the pending recommendations for adjudication and elimination for lands, uses etc. described under purported water rights. In some instances, these meetings provided a venue to solve objections in advance of filing of the state's report. The staff is also responsible for all uncontested cases in place of the Special Master in order to alleviate the burden on the Court. When cases are contested, the matter is referred back to the staff for resolving and settling disputes, but when resolution cannot be reached, the case file proceeds through the court's legal procedures. In addition, the staff participated in several pre-hearing conferences to provide clarification and assistance to the Special Master. These efforts, put forth by the staff, resolved the issues of concern and avoided the necessity for any hearings before the Court during this reporting period. A total of 177 surface water permits were reported to the District Court. Certificates of Appropriation issued from Court Orders totaled 18.

At the close of the last reporting period, the Big Horn staff was cross-trained to handle the increase of petitions filed within the Board of Control and handled four fifths of the workload of the Board petition processing in addition to their Big Horn assignments during this reporting period. In addition, the Big Horn staff was also cross-trained to conduct review of water distribution plans which is detailed under the Board of Control portion of this report. This reporting period, the staff was cross-trained to draft orders resulting from granted petitions under the Board of Control, which helped to reduce the backlog of orders.

GIS (Geographic Information Systems) Projects

The use of GIS technology has been utilized for the identification of overlapping water rights or conflicts in water rights within the Big Horn Adjudication. Tribal Reserved rights, Consent Decree Rights, Walton Rights and those State rights coexistent with all these rights are contained within the mapping projects in this division. Numerous requests from interested parties for maps were filled by the staff. The Big Horn map data and tabular data continue to be used to solve administration, litigation and jurisdictional issues. The staff assisted other state agencies, such as the Attorney General's Office, the DEQ and the WYDOT by providing Big Horn GIS information to determine jurisdictional issues on the Wind River Indian Reservation.

Big Horn Website

The staff participated on a cooperative project with the Wyoming Supreme Court and Special Master's Office to design the Big Horn Website that will be hosted at the Wyoming Supreme Court website. The purpose of this project is to provide the parties and the public with easy access to over 30 years of court record, court decrees and water rights data that was decreed to water appropriators within the scope of the Big Horn River General Adjudication. The website is expected to be tested by the parties and go live publically in the next reporting period. The staff provided decree data, design input and technical expertise about the Big Horn case to the project and participated on weekly telephone calls with the Supreme Court during this reporting period.

Big Horn Recommendations

The staff continues their dedication, hard work and patience while dealing with the appropriators and all parties involved in this complex Big Horn water case. The realization of our dream of completing the Big Horn Project is soon within reach. More cross-training of the Big Horn staff is a necessity to address the increasing workload within the Board of Control. An education plan should be developed and implemented at the close of the Big Horn Adjudication to distribute the knowledge of decrees and reserved rights. Integration of the Big Horn data into the new e-permit system of agency will be critical to the searching of all water rights within Water Division 3.

SUPPORT SERVICES DIVISION

By

Martin Zimmerman

General

The Support Services division has a total of thirteen employees and is responsible for the following operations:

- Information Technology and Telecommunications
  - Enterprise Systems - Hardware, Software, Backup, and Business Continuity.
  - Network – Telecommunications, Infrastructure, Firewall, and Security.
  - Help Desk & Support – All user issues and problems, Desktop equipment, software and peripherals.
- Application Programming and Databases
  - Programming - Application development and support.
  - Database – SQL & Microsoft Access programming, reports, and queries.
  - Database management.
  - Web – Website, Web Development, and Web Content.
- Geographic Information Systems
  - GIS – ArcGIS, ArcIMS and ArcSDE application support, development, and spatial data management.
  - GIS training.
- Microfilm & Imaging
  - Scan paper and microfilm records into electronic formats.
  - Maintaining film and appropriate archive procedures.
  - Manage documents systems and storage for scanned documents.
  - Maintain quality of scanned records and appropriate and safe archival.
  - Generate microfilm for state archival.
- Records Management
  - Maintain organization and access to all records for the agency

INFORMATION TECHNOLOGY AND TELECOMMUNICATIONS

The State Engineers Office is currently involved in a multi-biennium project (IT Initiative) to allow the agency to receive, process, and store all applications, permits, petitions, maps, etc. in a digital form. Phase III is underway and Support Services has an instrumental role in preparing and supporting this initiative. IT continued to make infrastructure modification and incorporated new technologies over the past year. The major change was the consolidation on all network servers and infrastructure equipment in the Herschler Data Center. Upgrades to field office computer systems were completed

with the goal of replacing outdated computers in all field offices. Semi-rugged laptops were purchased to assist personal when outside the office.

Application Programming and Databases

The database and web groups continue to utilize new technologies to develop system that allow all users the ability to search for and view water rights and associated scanned documents. The transition from Microsoft Access to SQL Server and Visual Basic .net continues to improve performance and reliability of the current system. This group continues to maintain current data systems while assisting in preparing and testing the new e-Permit application.

Geographic Information Systems

GIS continued to create, update and maintain spatial information for SEO technicians. We conducted several training sessions as well as provided numerous training resources for both field and headquarter staff. We continued working with ArcSDE and ArcIMS to disseminate data and maps on our internet site. We are still working collaboratively with the county offices, field personnel, and other agencies to collect LAT/LONG data on SEO points of interest. We hope to continue this progress to have all water rights tabular data depicted in a spatial format using ArcSDE and ArcIMS.

MICROFILM & IMAGING

Microfilm and Imaging group continued scanning of over 6,000,000 microfilm images. A second Microfilm scanner was acquired to assist in the scanning process. The new scanner with new scanning technology has helped to improve scan quality of old film images. The group also spent much time analyzing, organizing and preparing agency documents for scanning into the new Document Management System and e-Permit application. As of September 30, 2008 an estimated 296,000 microfilm images had been scanned.

RECORDS MANAGEMENT

Records management and records retention continued to be evaluated and analyzed as the on going IT Initiative and DMS systems get closer to going online. An initial update review of the retention schedules was completed.

Summary

This department continues to undergo major changes and advancements as we evolve to be the technology leader within the State Engineers Office. We continue to play an important role in the testing and supporting the IT Initiative. It is a great opportunity and an exciting time for all of the Support Services Staff.

LEGAL ACTIVITIES

By

Water & Natural Resources Division
Wyoming Attorney General's Office

North Platte River

In 2008, the Bureau of Reclamation sought changes to its water rights in Pathfinder Reservoir from the Wyoming Board of Control as a precondition to expansion of that reservoir. Water users in the Upper North Platte valley of Wyoming objected to the Bureau's petition and the Wyoming Water Development Commission intervened in the case. The contested case was still pending as of the end of the water year, while the parties engaged in settlement negotiations.

Colorado River

After Interior Secretary Dirk Kempthorne signed the record of decision for Colorado River shortage sharing guidelines in December of 2007, Wyoming's representatives monitored the Bureau of Reclamation's first year of reservoir operations under those guidelines throughout 2008. Attorneys from this office participated in various discussions regarding these operations, especially with respect to releases from Glen Canyon Dam for the purpose of achieving particular levels downstream in Lake Mead.

Another Colorado River issue of importance in 2008 was the content of proposed federal legislation to fund the Navajo-Gallup water project which will convey water from the San Juan River to the Navajo Reservation in New Mexico and Arizona, including the City of Gallup, New Mexico. An area of concern for the four upper basin states was how the water delivered to Arizona would be apportioned to Arizona under the Colorado River Compact and other components of the law of the river. This office provided legal advice to the State Engineer.

Litigation of a case in the United States District Court in Phoenix, Arizona between the Grand Canyon Trust and the United States continued in 2008. Wyoming is an intervening party, along with the other six Colorado River Basin states and several other public entities. The Grand Canyon Trust generally alleges that the Bureau of Reclamation is violating various federal statutes and rules in the manner in which it releases water from Glen Canyon Dam. The court has dismissed many of the Trust's allegations, and motions to dismiss the remainder without a trial were being briefed as of September 30, 2008. This office represents Wyoming in that case.

Several groups in Colorado are pursuing possible projects to pipe water from either the Green River or Flaming Gorge Reservoir across Wyoming for delivery to communities in the Front Range of Colorado. Although these concepts involve water that would be part of the State of Colorado's apportionment of Colorado River Basin water under the Upper Colorado River Compact of 1948, permits for construction of diversion facilities require approval of the Wyoming State Engineer. Throughout the 2008 water

year, attorneys from this office have advised the State Engineer on various issues arising out of this concept.

In water year 2008, representatives of the seven Colorado River Basin states began discussions with representatives of the Republic of Mexico, Mexican state and local governments, and water user groups about cooperative projects and agreements that could benefit water users on both sides of the border. To stay abreast of developments, the State Engineer and attorneys from this office have periodically consulted with the small group of representatives from the Upper Colorado River Commission who are participating in these talks.

Yellowstone River Compact

In early 2007, Montana sued Wyoming in the United States Supreme Court regarding water use on the Tongue and Powder Rivers. In April of 2008, this office filed a motion to dismiss all of Montana's claims based on various legal issues. Anadarko Petroleum filed a brief supporting Wyoming's positions, especially relating to groundwater. Montana, the United States (through the Solicitor General's Office), and the Cheyenne Tribe filed briefs in opposition to Wyoming's motion. Wyoming filed a reply brief. As of September 30, 2008, Wyoming's motion was still pending.

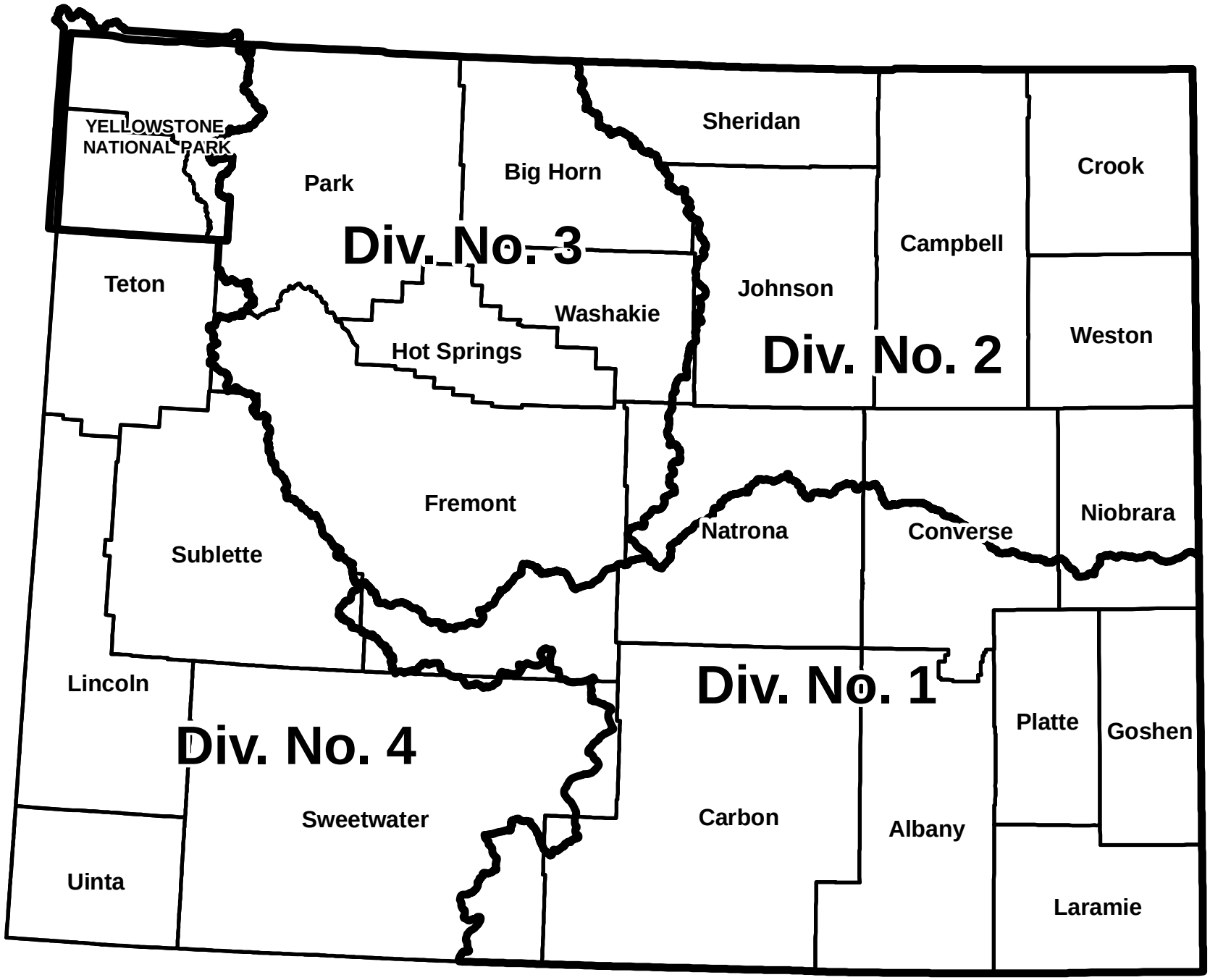
Intrastate Legal Matters

The Attorney General's Office continued to defend the State Engineer in several appeals to district courts involving his regulation of water use by Wyoming irrigators. On May 30, 2008, District Judge Arnold of the First Judicial District granted a motion to dismiss filed by this office in West v. State of Wyoming. In that case, several landowners had asked for a declaration that the State Engineer and Board of Control are violating various Wyoming statutes and constitutional provisions when permitting water wells drilled to extract coal bed methane. The unsuccessful litigants appealed the case to the Wyoming Supreme Court, where it is still pending.

The State Engineer held several hearings in 2008 in which coal bed methane producers with groundwater permits were required to show cause as to why their permits should remain in force despite their failure to produce substantial methane. This office assisted the State Engineer and Deputy State Engineer in their conduct of those hearings.

Big Horn River General Stream Adjudication

The Attorney General's Office continued to represent the State Engineer's Office in the Big Horn River General Stream Adjudication before the District Court of the Fifth Judicial District. In the 2008 water year, there were numerous objections to the State Engineers' recommendations to the Court regarding the adjudication of state permitted and decreed water rights (Phase III). Almost all of these objections were settled by agreement of the parties or withdrawn by the objectors prior to scheduled hearings before the Special Master.



Wyoming Water Divisions

Report of the Superintendent

Water Division I

By

Randy Tullis, Torrington, Wyoming

This report is a summary of water related activities and trends within Water Division No. I for the period of October 1, 2007, to September 30, 2008. Water Division I is comprised of the North Platte, South Platte, Niobrara, and Little Snake River drainages of southeastern Wyoming.

General and Climatic Conditions

Water Year 2008 will be remembered as the first year (of hopefully many successive years) of average to above average water supplies throughout the majority of Water Division I. Following 7 consecutive years of varying levels of "drought", the change to abundant supplies was welcomed by water users and administrators alike. And not to minimize those supply improvements, it is important to remember that there are several Division I basins that experienced below normal carryover, runoff, and natural precipitation and those water users continue to be challenged with shortages or out-right absence of water due to regulation administration or dry reaches of their surface water supply.

The water year was generally characterized by below normal reservoir carryover and deficient soil moisture profiles, a relatively normal and lower elevation "open" winter, and then a cool spring combined with above average precipitation. The cool spring delayed the stream runoff peaks back to a time period (late May and early June) that many remember as the normal or expected time for runoff. The consistent precipitation during the runoff only added to many bank full streams, and in several instances causing considerable damage to headgates and diversion dams, such as on Cottonwood Creek north of Wheatland. Many streamflows were sustained well into late June and early July, and many stream channels had debris built up that needed, and received, a good flushing. Shallow alluvial aquifers were substantially recharged with the sustained runoff. Rangeland natural forage, particularly cool season grass, was above average in quality and quantity.

Drainages that continue to present below average supply challenges are Horse Creek (between Cheyenne and Torrington), Chugwater Creek, and Bates Creek south of Casper. Horse Creek supplies many direct flow and storage users, Hawk Springs and Springer (Goshen Hole) Reservoirs being the major storage facilities. With limited accruals Horse Creek Conservation District (Hawk Springs Res.) delivered 0.15 AF/acre to their users and Goshen Hole Water Users delivered about 0.3 AF/acre. Chugwater Creek regulation began early in the spring and only a

handful of senior appropriators were allowed to divert supplies through the summer. Bates Creek regulation began in late June and as in the previous year, both surface and groundwater rights were administered as necessary. Those are sobering regulation longevity and dates, and delivery numbers, and it appears as if the headwaters in these drainages continued to miss the major precipitation events that other drainages enjoyed this year.

Similar to last year in the North Platte drainage, Water Year 2008 began with extremely dry conditions directly related to below average streamflows, carryover storage, soil moisture, and aquifer static water levels. Major carryover ownerships on October 1 into Water Years 2006, 2007, 2008, and 2009 were 402 KAF, 323 KAF, 286 KAF, and 573 KAF in the North Platte Project; 542 KAF, 443 KAF, 339 KAF, and 531 KAF in the Kendrick Project; and 54 KAF, 30 KAF, 54 KAF, and 85 KAF in the Glendo Project, respectively, and obviously an indication of a welcomed upward trend of North Platte mainstem storage. Pathfinder ownership filled on June 8, Guernsey ownership filled on May 23, Glendo Irrigation and Evaporation had both filled by May 29, and the biggest surprise was the accrual of over 244 KAF to the Kendrick (Casper-Alcova Irrigation District) ownership! For the same four water years Wheatland Irrigation District faired a little better with carryover storage of 34 KAF, 13.4 KAF, 16 KAF, and now back to about 34 KAF into WY2009, respectively.

As in the previous water year, a less-than-disastrous snowpack accumulation through the winter months, combined with respectable carryover, resulted in Reclamation's forecasted supplies to be above the 1.1 MAF comparison threshold in the months of February, March, and April and relieving Wyoming of regulatory administration during those months for the benefit of mainstem reservoir accruals. No allocation was declared by Reclamation during the irrigation season.

Throughout the Division streamflow peaks and sustainability were better than expected but variable. The LaPrele Creek drainage has experienced well below normal streamflows and LaPrele Reservoir storage accruals during this drought. Although requested, no regulation administration for LaPrele Reservoir accruals was enforced during late March and April (perhaps more hoping than knowing of future precipitation to come), and with late spring precipitation and runoff the reservoir filled and then spilled considerable flows for a few weeks, with sustained creek flows throughout the summer.

Bates Creek streamflows continued to show signs of the compounding effects of the extended drought. Regulation administration involving both surface and groundwater appropriations was enforced by Hydrographer Jack Gibson, concurrent with appeals by new landowners. The appeals were (again) upheld by this Superintendent, by the State Engineer, and have since been appealed to District Court. It appears as if this year's appeals will be combined with the single appeal from the previous year, and a District Court hearing has been scheduled for April 2009.

The Big Laramie River and tributaries experienced near normal streamflows, largely due to the cooler than normal temperatures during late spring and early summer and then a substantial runoff period. The priority date of administration in the upper part of the drainage has not been junior to the Wheatland No. 2 Reservoir January 29, 1898, for many years, and this year was eventually administered by Hydrographers Darren Parkin and Trevor Hiegel down to 1883 in both the Big Laramie and Little Laramie drainages (not counting an 1876 stock water "Sprague Lane" call in the off season). Wheatland Irrigation District delivered natural flow and storage of about 1.06 AF/acre to its members and was much better than 0.7 AF/acre in the previous year. Gray Rocks Reservoir unexpectedly accrued about 25 KAF during the late spring high flows and it was the first substantial water they stored in many years. Multiple Temporary Water Use Agreements by Basin Electric with local irrigation well users were continued through this water year.

In the southwest portion of Division I, the Little Snake River drainage enjoyed above average streamflows with the Wyoming National Guard assisting with sandbagging in the Town of Baggs during the high flows. High Savery Reservoir again filled and administration of High Savery storage was delivered to downstream appropriators that have purchased shares in the State owned facility.

Precipitation in the very southeast part of the Division seemed to again be surprisingly consistent and cooperation among many of the Crow Creek users has been encouraged by Hydrographer Scott Ross. An unfortunate failure of the Wyoming Hereford #2 Reservoir outlet structure in August required the immediate draining of the reservoir for both safety and rehabilitation concerns. The reservoir owner is actively working to rehabilitate the outlet works so that it can store water in WY2009.

Conversely, Horse Creek in District 2 again experienced well below normal precipitation and streamflows. Hawk Springs Reservoir ownership accounting continues to be improved and calculated by Hydrographer Gary Mehling to equitably distribute inflows and evaporation to the two reservoir ownerships, the Horse Creek Conservation District and the State of Wyoming. Hawk Springs Reservoir only accrued a dismal total of 4150 AF this water year.

Accomplishments

Reporting requirements for Modified North Platte Decree compliance has continued to be completed in a timely and accurate manner. Division I staff continues to improve the data collection and time budgeting skills necessary at critical seasonal changes to fulfill Wyoming's compliance requirements. Although there were a few unexpected hydrologic and "human nature" variables this water year, I am pleased to report that all reporting requirements, compliance obligations, and replacement water deliveries were completed. Replacement water for the Triangle Area was sufficiently and timely secured, thereby reducing the concern water users had the previous water year. Through the diligent efforts of State Engineer Patrick Tyrrell

and Wyoming Water Development Director Mike Purcell, by April 1 those replacement supplies had been located, secured, and began to be moved for temporary storage in Glendo Reservoir. Wyoming continues to determine and evaluate those replacement supplies that may be available in the short-term, in addition to pursuing reliable long-term supplies.

Other important reporting requirements included Triangle Well estimated annual pumpage by Well Inspector Kelly Mehling, post-2001 priority well pumpage in Wheatland Irrigation District by the Cheyenne Groundwater Section, intentionally irrigated acres and consumptive use reporting by Field Investigator Robert Foremen and Acreage Inspectors Scott Haskamp, Chad Pickett, and Connie Kersting. Instrumentation installation and data collection on ten of the "Big Eleven" irrigation reservoirs above Pathfinder Reservoir, as well as high data rate DCP and telemetry upgrading at numerous remotes site was in high gear this year under the supervision of Accounting Coordinator Brian Pugsley with other Division staff.

As in previous years, statutory required duties were completed by the Division I Superintendent and staff. Priority administration during periods of shortage is always evaluated and instituted in a timely manner due to the importance of changing hydrologic conditions and importance to economic success of water users. Field investigations for petition and proof verification requires considerable time to schedule and travel to often remote areas. Although this water year gave everyone a "breather" due to the general abundance of supply, I have observed no decrease in the number or complexity of Board of Control docketed petitions for water right changes in the Division. I think that this continues to be an indicator of the extended drought and appropriators becoming more aware of the importance of their water rights during shortages. Several hearings were held in contested case petitions as was necessary to gather important information for the Board to consider. As of this writing there are currently four (4) appeals of Division I related Board of Control or Superintendent actions; Rivett/Whisler of groundwater administration in the Bates Creek drainage, Double Eight Corp. in the Board action to their petitions for change in place of use, Joe Geringer in the Board action to his petition for declaration of abandonment, and Tom Wilson in the Superintendent action (or inaction) to regulate channel diversion to the Lucerne Ditch headgate.

Summary

Without the hard work and dedication of the Division I staff to the timely and equitable administration of the State's water resources, I would probably not have as many success stories to relay this year. But it is with sincere appreciation that I thank those staff that help settle the disputes or conflicts between water users, collect and compile the data for professional publication, and continue to assist the general public with water rights administration and questions (many that were asked by the same person the previous year and maybe trying to get a "different" answer), and application/paperwork assistance and completion. Water Year 2008 will be remembered as a year of generally abundant supplies in the majority of the drainage, and hopefully a turn-around to some better water years to come.

REPORT OF THE SUPERINTENDENT

WATER DIVISION II

by
MICHAEL B. WHITAKER, SHERIDAN, WYOMING

The following annual report submitted for Water Division II is a summary of the individual water administrators within the division.

GENERAL CONDITIONS

The 2008 water year began with 37 percent carryover in the Tongue River drainage, 29 percent in the Powder River drainage and Keyhole Reservoir was at 27 percent of capacity.

As of May 01, 2008, snowpack conditions were above normal, and significantly higher than the previous year. The Tongue River drainage was at 110 percent, Goose Creek drainage was 97 percent, Clear Creek drainage was 101 percent, Crazy Woman drainage was 107 percent and the Powder River drainage was 121 percent of average. The Belle Fourche drainage was 158 percent of average by May 1.

The irrigation season got started in early May with most of the ditches turning on. Peak stream flows occurred on May 23rd with the flows remaining high through June and into early July in the Tongue and Powder River drainages. Reservoir's began releases for irrigation on the 23rd of July and continued through the season. With these conditions, very little regulation was requested, the reservoirs were releasing water for irrigation but also to draw them down for the winter. The County Coalition operating Lake DeSmet was unable to complete repairs to the south dam which was scheduled for repair last summer, consequently, they do not plan to divert water into Lake DeSmet again this winter but may divert a small amount after runoff starts.

Once again the precipitation we received in May and June carried us through a major portion of the irrigation season, allowing for a little more carryover storage. Carryover for the 2009 water year for the Tongue River drainage was 44 percent of capacity, the Powder River drainage was 53 percent of capacity (this excludes Lake DeSmet), and Keyhole Reservoir was 43 percent. This year no water was released for BFID or CCID from Keyhole Reservoir allowing for the carryover to be higher than the previous year.

This year our CBNG reservoir inspection program continued with 816 inspections completed. Of these, 52 were unpermitted, 279 required ACR's or other changes to be able to accept CBNG water, 315 were approved and 170 were not approved. We started a second full-time inspector in August of this year which accounts for the increased number of inspections completed this year.

The Safety of Dams program involves inspections every five years for reservoirs which exceed 20 feet in fill height or 50 acre-feet in capacity. Of approximately 650 dams in Division II that fall into this program, 132 were scheduled for inspection this year. A total of 131 dams were inspected this year.

This past year 137 Surface Water Final Proof of Appropriations were taken and submitted to the Board of Control for adjudication of the water rights, along with the finalization of 141 stock reservoir inspections not to be adjudicated, but included in the Tab Book. In addition, 55 petitions reflecting various changes of water rights were acted upon. On-site inspections, proof of ownership, signatures and fees, and in the case of petitions, sometimes it is necessary to hold a public hearing.

SUMMARY

This by far has been the best year of this decade, we had plenty of water and temperatures did not get into triple digits. We have started a program to automate all stream gages and make the real time data available on the internet. Currently, several gages have been upgraded with more in the spring, the second phase of equipment will be ordered shortly and the information should start being posted on the internet by the start of the 2009 irrigation season. This program will assist in the administration of the streams and save time and mileage for the hydrographers.

REPORT OF THE SUPERINTENDENT

WATER DIVISION III

OCTOBER 1, 2007 –SEPTEMBER 30, 2008

LOREN SMITH
RIVERTON, WY

This report will summarize Water Year 2008 for the Wind River / Big Horn River system as well as that of the Clark's Fork Drainage in North Central Wyoming. Water Division III is made up of thirteen water districts served by a staff of seven hydrographer-commissioners, one field adjudication inspector, one lead hydrographer, one assistant-superintendent and one division secretary.

Reservoir carry over storage going into WY2008 was not a real rosy picture. The long dry final months of WY2007 left most storage facilities fairly well drafted to what would be considered a minimal level. The percent of capacity Sept. 30, 2007 column in the table below shows how little carryover was brought forward in the larger irrigation reservoirs in this water division. During this past water year runoff conditions were such that storage levels were able to recover significantly and the amount of storage available at the end of Water Year 2008 was in a much better condition. It was quite interesting to witness how the many years of drought experienced by the water users of this division had a lasting affect through continued conservative irrigation practices.

District	Reservoir Name	Usable Capacity	Usable Contents on Sept. 30, 2008	% Capacity Sept. 30, 2008	Usable Contents on Sept. 30, 2007	% Capacity Sept. 30, 2007	Change in Contents
3	Boysen Reservoir	757,851	628,830	83%	389,566	51%	239,264
3	Bull Lake	151,951	84,532	56%	47,672	31%	36,860
3	Pilot Butte Reservoir	34,600	11,689	34%	9258	27%	5,100
5	Anchor Reservoir	9,252	346	4%	30	0.3%	316
7	Adelaide Reservoir	6,210	6,010	97%	1,100	23%	4,910
8	Greybull Valley Reservoir	33,169	7,944	24%	2800	8%	5,144
9	Buffalo Bill Reservoir	644,540	484,411	75%	417,910	65%	66,501
15	Bighorn Lake	1,312,000	1,067,642	81%	956,743	73%	110,899
16	Upper Sunshine Reservoir	52,987	45,565	86%	5,698	11%	39,867
16	Lower Sunshine Reservoir	58,748	33,919	58%	5,129	9%	28,790

Precipitation in the form of snow pack accumulation began at a rate which was near normal in character. As the new calendar year dawned accumulation of precipitation waned and nearly ceased at times but by the end of February the picture began to brighten somewhat and by the end of May it was looking fantastic. The snow pack total for the Wind River Basin stood at 98% of normal, 89% in the Big Horn Basin and 115% in the Shoshone drainage at the end of February. These numbers became 168% of normal in the Wind River, 178% in the Big Horn and 176% in the Shoshone River Basin by the end of May. Overall precipitation through the water year was very close to normal and the timing was pretty good as rains came when the benefits were most useful. The overall precipitation numbers for the entire water year totals indicate the Wind River Basin at 97%, Big Horn Basin at 105% and the Shoshone at 110% of the 30 year average.

What has become the typical cropping pattern was again witnessed this year. The long wet cool spring did ruin some early bean plantings and some of these acres were too late in drying out to be re-planted. As for the sugar beet acreages this year, Holly Sugar reports bumper yields coming in this fall as quoted from the Billings Gazette "This year, it smells like Fort Knox.". For example the Lovell area was producing 24.4 tons per acre and a sugar content of about 17.16%. Another development which has possibly strengthened these numbers was that this year a new genetically modified strain of beets was planted throughout the basin. This new beet resists the Roundup herbicide leaving the beets stronger and healthier throughout the season, without weeds and multiple sprayings to deal with.

Even though this year we received a fantastic late spring snow pack, good runoff and normal annual precipitation we still did experience administrative regulation on many drainages throughout the season. The table below is a tabulation of the requests for regulation received this past year. Pre-runoff regulation was quite normal and expected in most locations. What is interesting, the post runoff regulation requests came trickling in about a month later than what has become the norm in this division.

Date of Call	District	Stream System	Calling Facility	Calling Party	Action
10-2-2007	8	Greybull River	Sandstone Ditch	Lee Adams	Approved
12-6-2007	13	Gooseberry Creek	Holland Ditch	Mark Nogle	Approved
4-8-2008	13	Gooseberry Creek	Holland Ditch	Mark Nogle	Approved
4-9-2008	8	Greybull River	Farmers Canal	Carter Piotrski	Approved
4-11-2008	5	Owl Creek	Bingham Ditch	Matt Brown	Approved
4-14-2008	5	Owl Creek	Kirby Ditch	Joe Campbell	Approved
4-25-2008	8	Greybull River	Sandstone Ditch	Lee Adams	Approved
4-29-2008	10	Bennett Creek	Berry Ditch	Jim Cox	Approved
5-6-2008	5	Cottonwood Creek	Tenderfoot Ditch	Butterfield	Approved
5-6-2008	9	Canyon Creek	Canyon Creek Ditch	Martin Moon	Approved
5-8-2008	10	Line Creek	Badura Ditch	Julia R. O. Lauh	Approved
7-15-2008	8	Greybull River	Sandstone Ditch	Lee Adams	Approved
7-28-2008	13	Gooseberry Creek	Toyne Ditch	C. G.	Approved
8-5-2008	1	Big or Middle Popo Agie River	Cemetery Ditch	Joe Crofts	Approved
8-8-2008	7	Shell Creek	McDonald Ditch	Gary Good	Approved
8-12-2008	1	Christina Reservoir Release	Little Popo Agie Irr. District Diversions	Bill Hamilton	Approved
8-29-2008	16	Medicine Lodge	George & Bayne	Muir	Approve

			Ditch		**d**

Interstate issues continue to be a priority as the lawsuit with Montana over administration under the Yellowstone River Compact continues. It is interesting how the temperature of the annual Compact Commission meetings has changed since the suit was filed. Even though the main issues of this lawsuit reside on the other side of the mountain, it is important to stay current and prepared to address the issues if they slip into the other drainages under this compact. The Big Horn Reservoir Long Term Issues Group continues to meet about every six to eight months to address water supply and management issues as they relate to the operation of Yellowtail Dam and Big Horn Reservoir. Wyoming's stance on this continues to be a strong opposition to the depletion of storage in the reservoir solely for the benefit of a fishery in Montana while the promised benefits of the reservoir, lake fishery, recreation and associated uses, are ignored on the Wyoming side of the state line. The issues dealt with by this group dovetail with the issues in the Mt v. Wyo. lawsuit as well as implications that may be realized subsequent to the possible Congressional authorization of the Crow Indian Compact as negotiated by Montana. Scrutinizing and understanding of all of these issues takes a lot of time and clear uninterrupted thought, which seems to be harder and harder to come by any more.

The 2008 legislature approved a budget request to add near real-time reporting satellite telemetry and data logging equipment to 105 existing critical stream and 42 existing canal gaging sites statewide. Much time and effort was put into making this allocation become a reality as well as instituting the program and keeping the process alive and moving forward throughout the year. Also, included in this request was the purchase of a new up to date gage records reduction software package for use by the field staff in the annual data work up process. This program was purchased and will be implemented during the early stages of WY2009.

Employee turn over again hit division III this year. A new district 3 commissioner was hired at the close of WY2007 only to resign in May leaving us with the most complex and expansive area again without an assigned hydrographer. The District 5 and 14 commissioner resigned his position during the early part of the year and the District 6 &12 commissioner decided to retire at about the same time. To say that the spring was a bit busy is a complete understatement. Two new hydrographers were hired in April to fill the Worland office vacancies while a qualified candidate for the District 3 position was not found until late August. This superintendent, our field inspector as well as other area hydrographers were all called upon throughout the season to pick up the slack and training of the new hires.

General adjudication field work continues in the division. The focus has shifted some but the time commitment is still there. With only a couple of files still needing to be reported to the court, time is now generally being spent in an effort to negotiate and settle objections to the permits that are being reported up to the Court. In most instances, the field work had been completed on many of the permits in the '90's but these files are being advertised and submitted to the court now. This brings about the issue of stale or new ownership and these new owners often question why they are having water rights eliminated from their property when it was actually agreed upon by their predecessors in interest to the property. There has not been much effort spent afield doing original inspection work this year except for a couple large files on the Greybull River and in the Hyattville area. In dealing with objectors, efforts clearly pay off in meeting with and dealing with them one on one. In regards to working with the objectors, we have been rather lucky in being able to solve most objections. Only one case went to court this past year that we could not solve. The Betty Whitt objection to the recommendation for adjudication under the Aragon Ditch on the Wind River made it before Fifth Judicial District Judge Gary Hartman just prior to his retirement in August. This case appears to be headed to appeal at this time as Judge Hartman upheld the submitted recommendation of the State Engineer's Office.

Division III staff have continued to work hard on staying current with dam safety inspections and the snow survey program this year. Even with the continued drought and heavy regulation workloads Division III found the necessary time to complete many proof inspections. Having inherited the field adjudication inspector position at the close of field work under the Big Horn adjudication, it is nice to have a position totally focused on completing Proofs of Appropriation/Construction. Between the nearly seventy inspections completed by the field inspector and those completed by myself and other lead staff, we continue to slowly diminish the backlog of inspections as many new proofs continue to stream out from Cheyenne. The new NRCS water rights verification forms take a lot of staff time to research and complete. Essentially, staff must do a water rights search of the project area eligible for Environmental Quality Incentives Program (EQIP) funding and then make a recommendation or verify that the water rights are in proper form for the project to qualify for funding. We believe this extra workload is beneficial as it puts the appropriators on notice up front as to what must be done before their project can move forward, and not putting us in the position of shutting down projects because the water rights are not properly recorded.

Area Highlights:
In the Wind River Basin, during spring of 2008 the three Riverton area irrigation districts, Midvale, LeClair and Riverton Valley, all under Permit 7300 worked on negotiating a new or revised Tripartite agreement. The new agreement, adopted in May of 2008 will add interpretation to the old agreement which was originally signed in 1917 and replaces the order of the State Engineer dated March 2004. Significant time was spent assisting the districts by providing data, details and information as they worked through the complex issues faced with the drafting of this agreement. This highly contentious agreement has been litigated significantly over time, and it is hoped that through this new document these issues can now be put to bed and the river can be administered easier and with more flexibility than has been done in the recent past. This same type of cooperation was also seen between the districts below Boysen when in late July it was apparent that the extreme mossing conditions taking place on the river were wreaking havoc with pumps, meters, pipelines etc., while costing those running moss catchers a load of money. Through cooperative efforts, a 5000 C.F.S. flushing flow was agreed to and initiated over a two day period. The benefits of flushing this moss down the river were huge and lasted throughout the year.

Tribal issues continued throughout the water year, starting off with our response to the Tribes joint draft water plan. We understand the Tribe's point of view on many issues but we do have many areas where we disagree with their interpretation of the "Law of the River" as outlined in the multitude of court decisions from the Big Horn Case. Again, during the irrigation season we received multiple calls regarding non-Indian water users on the reservation being denied water when Tribal users with similar water rights were enjoying full ditches. In most cases, I was able to work with the Tribal Water Engineer's Office to remedy the situation but there remain a couple of these situations that don't stay fixed long. A major hurdle was crossed at the August Board of Control meeting in that for the first time the Tribes came to the Board with a petition to change the point of diversion and means of conveyance for a Reserved water right. The move from the defunct Bawlin Bull Pump to the Riverton-LeClair canal was a long time in coming but it was a good test project to put the intent of the "Law of the River" into real world practice. We expect to see more of these types of petitions coming in, in the near future as well. Also, in dealing with Tribal issues, the lack of BIA funding for critical canal gaging stations on the Reservation continues to be a problem. We believe that the BIA has a trust obligation to follow the intent of the court decisions and provide this gaging. Without this gaging, we will be unable to quantify the water used by these diversions as they progress toward their annual volumetric cap. For example, the Chessington-Wilson diversion on Owl Creek has a reserved right award of 1719 acre feet of water annually. During WY2008 we recorded a diversion of 3167.7 acre feet, nearly double the award. Without gaging in place we would have no credible evidence to allow the curtailment of further diversion beyond the award allocation while junior state right holders go without water they are legally entitled to.

With the establishment of new hydrographers in five of the divisions districts, it is an opportune time to institute changes that have needed to be completed in order to bring administration into line with the best, most defensible processes out there. It was very evident that new reporting requirements and tracking of the delivery of exchange water in the Owl Creek drainage really paid off. In this superintendent's tenure, I had not seen the completion of a single full turn of exchange delivery having taken place, yet this season the hydrographer completed not one, but three full turns of exchange delivery on that system. The comments of how wonderful it worked were heard throughout the system but especially by those near the lower end of the drainage who have essentially worked with a very limited supply for many years.

On the Greybull River system, we fully instituted the application of shrink on the delivery of storage and exchange water this season. A lot of work took place in WY2007 to define the shrink and work with the Greybull Valley Irrigation District to come up with the processes and percentages to be used. With reluctance from the District to initiate anything, it became a decision from this office to institute shrink application to all deliveries this season. A 1993 study by Water Development headed up by Victor Hasfurther defined a 14% conveyance loss as an average through the Greybull River system. Basically, the senior direct flow rights in the lower reaches of the drainage were absorbing and being shorted by the delivery for storage water which was being delivered in whole. Through our investigations, it was decided to go with a 5% shrink applied to the delivery of storage, regardless of where it was being delivered. With the high and prolonged runoff, it wasn't necessary until quite late in the season to begin storage use but it did provide us a period of time to work with this concept. At the time of this writing, I have heard no complaints regarding this matter.

The Nowood drainage was one of the areas seeing a lot of action this season. With a new energetic hydrographer in place it was a case of showing her the basics and getting out of her way. With higher runoff and stream flows in the area she had time to complete a very thorough inventory of diversions, pumps and weirs in order to bring these two districts up to a much higher standard and striving to get administration back to a complete and accurate system of accounting and water distribution. Many appropriators in the area were contacted with work needing to be completed to bring their facilities up to snuff and into compliance with the statutory requirements. The general adjudication work wrapping up in this drainage also put appropriators in the mode of clean up, as the final remaining permits being worked on under the general adjudication dealt with the Anita and Anita Supplementary Ditch systems. Much realignment and petition work was necessary to clear up the water rights in order to open the door for the adjudication of some remaining lands under various permits in this system.

WY2008 was fairly quiet in the Shoshone River again this year. It seems that adequate water has a tendency to do that. Subdivision development continues to take the lion share of our time in the Shoshone drainage. With Water Distribution Plan, Authorization to Detach and subdivision reviews all needing their time to complete we find ourselves looking for more time to get to everything. Many Proof of Appropriations have been completed this past year and it is good to clean up the 1990 filings on the Cody Canal for many of their supplemental supply rights. Inventory of stream and canal gaging sites and equipment needs took place in WY2008 as our main focus under the legislatively funded gaging upgrade program will be to gain near real-time data on the major canals and diversions along the Shoshone River. This in turn will make our accounting of water use on this river more accurate, timely and much more efficient prior to the next irrigation season.

Summary:
This year was a long overdue respite to the drought that we have endured over the last nine years. We enter WY2009 with a very solid reservoir carryover situation and soil moisture profiles look wonderful after seeing good precipitation, cool temperatures and very little wind to close out WY2008. With the changes in staff, the covering of areas with vacancies and the subsequent training that takes place once a

suitable candidate is found has provided this superintendent and the staff of Division III with opportunities to rediscover and learn new areas of the division. I find it invaluable to have had the chance to learn some the finer intricacies of my division while getting back up to speed on the technology that my staff ably employs on a daily basis. I believe this all makes each of us better and makes us not only see the forest but able to see that individual trees that make up that forest. Between issues related to the job and going on outside the job, this water year will go down as the most demanding and taxing year I have been through yet, it is also, probably one of the most rewarding years to have completed. I want to commend my entire staff on continuing their admirable work, the Cheyenne staff for their assistance and ability to keep us informed and especially the advice and counsel of the rest of the Board of Control, relied upon throughout the entire year.

REPORT OF THE SUPERINTENDENT

WATER DIVISION NO. IV

By

Jade Henderson, Cokeville

This annual report is a summary of Water Year 2008 as experienced in the drainages of Wyoming's Green, Snake, and Bear Rivers located west of the Continental Divide but includes its westerly Red Desert Basin. It is written generally from the perspective of field administration of water rights. More detailed accounts of respective local areas can be obtained from the individual summaries published in the Hydrographers' Annual Report. (The Little Snake drainage, although part of the Green [Colorado River] basin, is administered under Water Division I which includes the easterly Separation / Soldier / Dry Lakes portion of the Great Divide Basin.) More complete interstate, co-operative streamgaging, and Board of Control information is found under their separate reports.

General Conditions (Personal, Personnel, and Climatic)

Halfway through the Water Year, we suffered a most difficult loss when none of us "saw the writing that was on the wall" from our long-time workmate and friend Kevin Wilde, as he somehow concluded that his life should not continue. We miss him, his reliability and humor; and the personal toll seemed to reverberate indirectly through other personnel vacancies in the heaviest staff turnover of this Superintendent's 16 summers.

The Assistant Superintendent in Big Piney had resigned a couple weeks before Wilde's death. Kevin Payne willingly assumed Mr. Wilde's Lead Hydrographer responsibilities, and was later promoted further to the position of Assistant Superintendent as relocated to the Cokeville office. We are pleased to have Mike Johnson hired to fill the resultant Hydrographer vacancy in the lower Bear drainage. No sooner had summer intensity begun than supervisor John Yarbrough regrouped to cover the seasonal Water Commissioner vacancy from Rex Hamner's move with his primary career. (After the Water Year ended, we are pleased to hire DeLynn Saxton into the Lyman office as a year-round Hydrographer to cover primarily the Black's Fork drainage.) The shuffle included reassignment of District 1, the lower mainstem Green River and easterly tributaries including Red Desert Basin, to Mr. Yarbrough's increased Lead Hydrographer responsibilities. Midsummer, Don Barney retired after 3 decades as one of our Teton County Water Commissioners, but we were happy to find Bodean Barney interested in joining our team. Ed Boe willingly took charge of the central and upper Green, and was later promoted as Lead Hydrographer to supervise that and Teton's Snake drainages. We end the year ready to open the final vacancy (for a seasonal Water Commissioner relocated back to the Big Piney office) where the first vacancy began. In all, 4 initial vacancies generated hiring and movement to refill 7 of our 17 positions in a single year. Economic downturn, erupting at the end of this Water Year right before a major national election, may reduce the abundance of jobs that compete for our valuable human resources. But I have increased appreciation for each of the Water Division IV

staff in their ongoing personal and professional strengths and commitments, particularly in this year's difficult challenges and new opportunities.

Besides additional staff hours worked willingly to cover vacancies, the Superintendent's excess hours continued up again this year. Demands made it even more challenging to take opportunities for influencing legal briefs against judicial activism, to provide proper staff support for critical enforcement, and to give adequate attention to the quasi-judicial responsibilities on the Board of Control (such as the carefully composed fact-finding Order Records of its final action on each water right contest, which decisions are then appeal-able to the courts). This Board member was particularly enlightened by the rest of the Board's persuasion to reach a better conclusion in the Wilson Bench contested petition. But even with such helpful support, the State should consider restructuring the burn-out load on the competing responsibilities of the Water Superintendent.

In a reversal from recent drought years, snowpack increased from low in early winter to fairly high in the spring. And springtime came late and gradual, keeping streamflow peaks without much high water, which extended the runoff and subsequent decline until later in the summer when the growing-season's irrigation demand was winding-down for harvest anyway. The cold and wet spring had slowed crop growth until the warm and dry summer finally arrived. Low reservoirs didn't generally fill as fast and high, but protracted natural flow kept most of them from being heavily drafted. With "climate change" threatening deeper curtailment of water rights, studies need to explore new "green" claims that cheaper microbial soil-treatments reduce the healthier plants' water requirements while also increasing the soil's water-holding capacity. Federal studies have instead tried to discredit prior-appropriation water law as over-appropriating.

Green River

Working priority schedules – for both Wyoming and Utah in the Henry's Fork drainage – have yet to be polished into a comprehensive combined list under the Upper Colorado River Basin Compact. They have also not been edited to flag junior duplicate or overlapping water rights. But GIS mapping that shows the overlap of natural flow rights from both states is essentially complete, with Utah continuing its effort to find staff time for delineating the sole-supply acreages of their own over-filings. Adjudicating newer Wyoming proofs, on lands already involved with Utah rights, is therefore still on hold.

As a result of new staff and hands-on supervision by the Lead Hydrographer, there have been significant improvements in the annual regulation of Black's Fork and Smith's Fork Creek for springtime storage and for delivery from Meeks Cabin and Stateline Reservoirs. This includes better communication (including cell phones), stricter protocol with the regulated users, and less inclination to judge beneficial use in qualifying an early call for regulation. The misguided Berman-Bond legal action in Utah failed to get Wyoming to shepherd their release of out-of-priority and tiny second-fill storage, in Utah's China Lake Reservoir, to their Wyoming diversions. Their own delivery of post-regulation release appeared again largely un-diverted. New reciprocity passed in Utah allows agreements under Wyoming's law on cross-border water issues, as un-compacted priority makes further headway in reaching across state lines.

One of our $7000 SonTek acoustic sensors was tried and found successful as both a measuring-device and datalogger in the flat "Wall" Canal at Fort Bridger. Tolerant persuasion has been only partially and slowly successful in 10 years with voluntary installation of measuring flumes on Ham's Fork, without "Notices to Water Appropriators" being organized up-front by the enforcing staff for the Superintendent to order deadlines. But programs funding extended radio telemetry and requiring flumes are now being broadened throughout Wyoming's Upper Colorado River drainage. Most of the pre-rated flumes required next spring on Pine Creek diversions below Fremont Lake Reservoir have been installed. Similar statutory Notices, for all diversions on the typically-regulated streams of the east-slope Wyoming Range, will proceed this winter (with deadlines over 1 year away). A sampling of diversions on non-regulated streams may attempt voluntary installations. Last year's headgate-repair Notices on the Piney Creeks have been largely successful, with some follow-up necessary by Hydrographers.

Only South and Middle Piney Creeks experienced the usual calls to regulate in District 10. Both again saw the same irrigator's long history of defiance against a lengthy list of Hydrographer-Commissioners who've posted statutory tags on his regulated headgates. Particularly disturbing is the failure of the Sublette County & Prosecuting Attorney's Office to take seriously the violator's pitchfork threat, and refusal to file charges as statutorily assigned (on grounds they are conflicted to prosecute a member of their county's Planning & Zoning committee). After submitting repeat "Notices of Violation" on this principal in Cross Lazy Two L&L, political connections in Sublette County appear more powerful than the rule of law and order. Having failed to convict him in court with a previous County Attorney, the legislature had agreed with us and the Governor had signed into law stiffer water penalty statutes. But staff of the recently-resigned Prosecutor gives us the untested excuse that the new penalties are unenforceable.

Even with our reduced staff, a change in supervision from the previous Assistant Superintendent has immediately resulted in a significant increase in the number of backlogged proofs finally being taken by willing Hydrographers in the upper Green.

Snake River

Changing from busy employees of Teton County's Road & Levee Department to direct contractors of the State Engineer's Office has resulted in more time available for proofs, enforcement, and responsiveness in Jackson and Bondurant. We await a legislative Budget Session for permanently converting to State employees and equipment, including office lease payments where Teton County has been generous enough to let our Jackson office remain in their building while we seek funding.

Incidents requiring proper permitting for ponds occurred again near Jackson, Alta, and Afton (as well as in Sublette County). Letters from the Board of Control – invoking the statute requiring recent historical use in order to change the Use or Place of Use on existing water rights – have caught the attention of consultants and users seeking such changes, particularly in these subdividing areas. Education is similarly advancing with the tighter scrutiny and caution given to limit misuse of "Authorizations for Detachment."

Tiny and now-ephemeral Bradshaw Spring Creek near Grover in the Salt River drainage is evolving in development of ponds, changes in Points of Diversion, and resultant Requests for Regulation. The recipient of several "Notices of Violation" has reported obtaining the lease on the other half of the calling senior right, and has announced plans to re-establish its record Point of Diversion to split the regulated flow well upstream of the callers' changed Point of Diversion. The Lincoln County & Prosecuting Attorney continues to decline filing charges from our Probable Cause submission.

Decades of similar feuding in Star Valley between native and newer owners on Birch Creek near Etna continues to move through new Board petitions, dramatic hearings, internal distribution disputes, and competition between preservation versus development rights. After being invited-in several years ago by the native to help divide water shortage on a pipeline lateral of Hardman Canal, our Water Commissioner was this year invited-out by one of the newcomers when our pressure-testing confirmed his disadvantage during plentiful supply. Last winter we declined to accept internal priority regulation requests that violate the authority of Stewart Creek Irrigation Company's shareholder bylaws. Despite being upheld on in-house appeal, by spring we backed-down upon legal advice from our Attorney General's Office in order to get the legal appeal by Dr. Champa's attorney dismissed in District Court. But his late-summer "Request for Regulation" got the whole Pipeline shut off to enforce his Company's non-compliance with our measuring device "order," even though his laterals had complied.

Bear River

Interstate regulation was imposed in neither of this compacted river's Central or Upper Divisions this summer. But unofficial general co-operation with Compact allocations (sometimes imposing State priorities) allowed more flexibility again this year in the Upper Division. Wyoming and Utah Sections there were thus able to trade surplus with the timing of actual demands without having late storage in Whitney Reservoir halted by official interstate regulation for irrigation. Good streamflow and careful operations of Woodruff Narrows Reservoir Company (particularly at their majority Utah diversions) resulted in more carryover this year as they released very little storage to supplement shareholders' direct flow. We are planning to send out deadline letters for exchange users above Evanston to record their Wyoming storage-delivery operations and rules.

While we expand radio telemetry in the upper Bear around Evanston, Idaho below Cokeville continues to follow the Utah & Wyoming lead to include measuring devices on its diversions, using similar cost-share from federal BuRec water conservation grants.

After extending their deadline another summer to accomplish the necessary ditch maintenance for an accurate measuring device, we have placed Pixley West Ditch back under enforced denial of water. Its co-owners resist the advised down-ditch cleaning that would relieve their flume's submergence, as proven by their ineffective bypass-cut. The new Assistant Superintendent has denied 2 old proofs in the Central Division, successfully persuading their current owners against attempting injurious reactivation under old priorities that haven't been exercised during our frequent regulation.

Conclusion

We were successful in reassigning 2 more co-operative USGS streamgages from Water Division II to Division IV sites for our remaining 2 full-time Hydrographers to operate for expert training on flow measurement and recording. Our lack of cableways and time still make it difficult to meet the meticulous high-flow standards of the USGS in achieving a federally-publishable gage record. With our attention and accuracy focused at low-flow, other responsibilities demand our time during high-flow. Any additional new streamgaging sites without a crest for a pre-determined rating curve should therefore be contracted to the USGS. Purchase of the budgeted acoustic Doppler "River Surveyor" has been delayed for technical difficulties during demonstration. But this new substitute technology is needed for safer measurement of non-wade-able flows without expensive and dangerous cableways or bridges.

Delay continues in compiling an updated Tabulation Book and the Hydrographers' Annual Report from the agency's comprehensive e-Permit development. The latter forced return for yet another year to the process of interfacing Access lists to Excel spreadsheets, of data back to the Access database, then to Sequel, and finally to CrystalReports for publication. The purchase of improved streamgage reduction software for our continuous records is in transition to learn and simplify the sophisticated Aquarius package. Since the Cokeville office is out of space, we have joined with other tenants to encourage our landlord (the Town of Cokeville) to speed funding and construction of a building expansion.

The tragic loss of a very valuable and well-liked team member is one of those unwanted experiences this year that add significance to the genuine but standard closing of this report, adjusted for us who continue on. A motivated and ambitious team is critical and appreciated as we look at old challenges and new opportunities. We have gifted staff; and the appreciation for integrity, work ethic, and attention to accuracy and follow-through are important values for the agency's entire team.

BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND PROFESSIONAL LAND SURVEYORS

By

Christine Turk
Executive Director

Objectives

The primary responsibility of the Board is self-regulation of the engineering and land surveying professions for protection of the public in Wyoming. Careful processing of applications from individuals, corporations and partnerships registered in other states, and administration of examinations for new applicants in Wyoming occupy most of the Board's efforts. In addition, the Board investigates complaints against engineers, land surveyors and business entities. It is the Boards goal to reduce the backlog of enforcement cases, and enhance the website by ensuring information is relevant and current.

Major Accomplishments

The Board continues to be efficient in processing applications, and properly completed comity applications are being processed and licenses are granted within a few short weeks of completion. The Board continues to be attentive to its registrants and keeping the public educated to the need of professional registration for protection of the public.

Law Enforcement Activity

The Board has vigorously pursued the requirement that persons offering professional engineering and land surveying services in Wyoming become licensed. Correspondence from the Board Office or the Attorney General's Office has usually been effective in obtaining compliance with the statute.

The Board continues to use the National Council of Examiners for Engineering and Surveying's (NCEES) national database for retrieving information on disciplinary matters, as well as providing information on Wyoming registrants who are disciplined.

The Board continues to investigate every complaint concerning the practice of our registrants. The Board now has the expertise of two investigators who investigate all Complaints. This has streamlined the process and in most cases, a resolution has been accomplished without a formal hearing.

Finally, the Board has provided exceptional leadership at the national level with several of its members serving as officers, committee chairs or committee members of the NCEES.

PROBLEMS AND RECOMMENDATIONS

The Board continues to explore alternatives for providing a swifter means of completing resolution of complaint investigations. Due to the Board meeting on a quarterly basis however, some recommended resolutions are delayed due to the meeting schedule.

SUMMARY OF REGISTRANTS AS OF SEPTEMBER 30, 2008

		RESIDENT	NON-RESIDENT	TOTAL
PROFESSIONAL ENGINEER	INDIVIDUAL	1,047	4,257	5,304
	CORPORATION	95	481	576
	TOTAL	1,142	4,738	5,880
PROFESSIONAL LAND SURVEYOR	INDIVIDUAL	125	184	309
	CORPORATION	15	14	29
	TOTAL	140	198	338
PROFESSIONAL ENGINEER & LAND SURVEYOR	INDIVIDUAL	76	44	120
	CORPORATION	40	28	68
	TOTAL	116	75	191
ENGINEER-IN-TRAINING		1,323	635	1,958
LAND SURVEYOR-IN-TRAINING		50	10	60
GRAND TOTAL		**2,771**	**5,656**	**8,427**

The purpose of the NCEES is to provide an organization through which state Boards may act and counsel together to better discharge their responsibilities of regulating the practice of engineering and land surveying as it relates to the welfare of the public in safeguarding life, health and property. Serving the NCEES at a national level has been very beneficial to the operations of the Board. While all Member Boards attempt to have uniformity in their requirements, without the involvement and exchange of information from state to state, achieving that uniformity would be essentially impossible.

STATE BOARD OF EXAMINING WATER WELL DRILLING CONTRACTORS AND WATER WELL PUMP INSTALLATION CONTRACTORS

by

Lisa Lindemann, Administrator, Ground Water Division

The State Board of Examining Water Well Drilling Contractors and Water Well Pump Installation Contractors (the Board) was created by legislation in the 2003 session. The Board consists of seven members and has been a functioning entity since June 2003.

Mission

The initial mission of the Board was to administer a voluntary certification program. The purpose of the certification program was to protect the public from incompetent or unethical water well drilling and water well pump installation contractors, as well as to promote excellence in the practice of their area of expertise.

Since the 2008 Legislature passed HB0055, *Water Well Drilling and Pump Installation Licensure*, which requires mandatory licensing of water well drilling contractors and water well pump installation contractors, the Board's new role is now one of administering a mandatory licensing program.

Licensing provides the public with a level of protection they did not previously have from a health and safety perspective. With licensing, water well owners that have experienced poor or inadequate performance by a water well contractor may file a complaint with the Board. The Board is authorized to suspend or revoke the license of water well contractors that fail to meet established standards of the profession. Additionally, licensing protects the ground water resources of the state and promotes excellence in water well drilling and pump installation practices.

Board Members

WY-08 Board members include:

Board Member:	Representing:	Term Expires:
Jack H. Weber	At-large Water Well Drilling Contractor	3/31/11
Charles W. Wilson	Water Well Driller	3/31/09
LeRoy Christiansen	Irrigation Well Contractor	3/31/11
Steven R. Barbour	Water Well Pump Installation Contractor	3/31/09
Richard G. Stockdale	Public Who Owns an Active Well	3/31/09
Lisa Lindemann	SEO Designee	3/31/09
Kevin Frederick	DEQ Designee	3/31/11

Legislation

Enrolled Act No. 58 was signed by Governor Freudenthal on March 12, 2008 and required licensure of water well contractors (drillers and pump installers) by July 1, 2008. Until the passage of the Act, Wyoming was the only state within the lower 48 that did not require some form of licensure, certification, or registration of water well contractors.

The Act provided a "Grandfather Clause" where any person who has been actively engaged as a water well drilling contractor or a water well pump installation contractor in the state of Wyoming for the five years prior to July 1, 2008, shall be exempt from the examination requirements until June 30, 2009. Satisfactory evidence presented to the *Examining Board of Wyoming Water Well Drilling Contractors and Pump Installation Contractors* (the Board) may include written affidavits from three individuals competent to attest to the applicant's professional work experience.

The Act also provided for reciprocity. A person holding a license entitling him to drill water wells or install pumping equipment in another state may apply for a Wyoming water well drilling contractor's or water well pump installation contractor's license through reciprocity. If the other state offers reciprocity, and if the Board determines the standards and requirements of the state in which the applicant is licensed are equal to or exceed the standards or requirements of this act, the Board may waive the examination requirements except the applicant shall successfully complete an examination based on Wyoming statutes and rules relating to the drilling of water wells or installation of pump equipment. The applicant shall also pay all applicable fees.

The licensure requirements do not apply to any person:

- drilling an oil or gas well or installing a pump in an oil or gas well, where the oil or gas well is permitted by the Wyoming Oil and Gas Conservation Commission.
- installing a pump in a well on land owned or leased by him or on which he is employed on a regular basis;
- drilling a well on land owned by him; or
- drilling a monitor well that does not require a permit from the State Engineer.

The Act established criteria for licensing and license renewal, continuing education requirements, allowed the Board to set certain fees, provided for a complaint process and investigation by the Board, required a conspicuous posting of the license at the job site, provided for license revocation or suspension, provided penalties for violations of the Act, and creation of an account in which funds from permit application fees can be deposited and used to operate the Board and administer the Act.

If a water well drilling contractor or pump installation contractor is not licensed by June 30, 2009, he shall comply with all the requirements of W.S. 33-42-108, including taking and passing the examination.

The licensing of water well drilling contractors and the licensing of water well pump installation contractors are separate and distinct activities.

Applicable Statutes

The statutes governing the mandatory licensing program can be found in Title 33 – Professions and Occupations, Chapter 42 – Water Well Drilling Contractors and Water Well Pump Installation Contractors, W.S. §33-42-101 through W.S. §33-42-117.

Implementation of the Licensing Program

The State Engineer agreed to assist the Wyoming Board of Examining Water Well Drilling Contractors and Water Well Pump Installation Contractors in the initial implementation of the licensing program. To that end, Ground Water Division staff worked with the Wyoming Board of Registration for Professional Engineers and Professional Land Surveyors in modifying their computer software program to fit the needs of the Water Well Board. Ground Water staff fielded all calls from potential licensees, published public notices, commenced rulemaking, and developed application/information packets to send on request. During WY-08, Ground Water staff licensed 47 water well drilling contractors, 35 pump installation contractors, and 66 water well drilling/pump installation contractors.

The State Engineer's Office was also successful in obtaining funding for the Board. The 2008 Legislature created a new statutory provision, W.S. §9-1-904(b), allowing the State Engineer's Office to deposit an amount not to exceed $25 from each domestic, stock, irrigation, municipal, industrial, and miscellaneous well permit application fee into an account created under W.S. §33-42-116 for wells which require the use of a licensed well driller pursuant to W.S. §33-42-103.

Rulemaking within Chapter 1 is required to allow the Ground Water Division of the State Engineer's Office to increase the fees for permit applications for domestic, stock, irrigation, municipal, industrial, and miscellaneous use wells within the statutory limits provided by W.S. § 9-1-904 (a) (v) (A) and (D). The new rules will increase fees for domestic and stock well applications from $25.00 to $50.00, and fees for irrigation, municipal, industrial, and miscellaneous use wells from $50.00 to $75.00.

Increasing the permit fees for wells and depositing up to $25.00 per permit in the Water Well Contractors Account, will provide the necessary funding needed to operate and manage the *State Board of Examining Water Well Drilling Contractors and Water Well Pump Installation Contractors*, and administer W.S. §33-42-101 through W.S. §33-42-117. Rulemaking will commence in WY-09.

When new rules have been promulgated and the Board starts receiving fees, it will develop a standard budget, hire their own staff, and work independently of the State Engineer's Office.

Board Meetings

In WY-08, the Board met three times. Additional meetings were needed to assist in development of the proposed legislation and subsequent implementation of the Act.

- October 18, 2007, Jackson, Wyoming
- April 18, 2008, Casper, Wyoming
- June 23, 2008, Casper, Wyoming

Board Training

Board members Chuck Wilson, Jack Weber, Steve Barbour, and LeRoy Christiansen participated in the Professional Licensing Board Orientation and Training, presented by the Attorney General's Office September 17-18, 2008, in Cheyenne, Wyoming.

PERSONNEL LISTS
STATE ENGINEER'S OFFICE
(As of September 30, 2008)

Tyrrell, Patrick T. ..... State Engineer
LaBonde,Jr., Harry C. ..... Deputy State Engineer

ADMINISTRATION

NAME	TITLE
Branigan, Loretta	Human Resources Manager
Rayment, Kari	Executive Assistant
Winders, Steve	Financial/Statistical Specialist 2
Wertz, Tina	Financial/Statistical Specialist 5
Shappell, Madeline	Financial/Statistical Tech. 2

SURFACE WATER

NAME	TITLE
Barnes, John	**Administrator, Surface Water**
Hand, Mike	Safety of Dams Engineer
Bratton, Leah	Water Management Specialist 1
Couch, Chris	Water Management Specialist 1
Blanks, Dana	Administrative Specialist 2
Geyer, Jeffrey	Water Management Specialist 1
Cameron, Kathy	Water Management Specialist 2
Feltner, Jason	Water Management Specialist 1
Monica Lane	Administrative Specialist 2
Lucero, Linda	Water Management Specialist 2
Mathisen, Rebecca	Water Manager 3
Anderson, Ryan	Administrative Specialist 4
Engkvist, Claire	Administrative Specialist 4
Stockdale, Larry	Safety of Dams Engineer
Toppenberg, Shirley	Administrative Specialist 1
Velez, Phillip A.	Water Manager 3
Cowley, Jeff	Water Management Specialist 2
Wright, Cheryl	Water Management Specialist 3
Hopkins, Carol	Water Management Specialist 3

SUPPORT SERVICES

NAME	TITLE
Zimmerman, Martin	**Administrator, Support Services**
Castle, Daniela	Administrative Specialist 3
Cavaliere, Libby	Administrative Specialist 3
Collins, Andrea	Computer Technology Specialist 3
Holmes, Katie	Administrative Specialist 3
Hoobler, Beth	Water Management Specialist 1
Irwin, Kay	Administrative Specialist 3
Lopez, Joe	Computer Technology Specialist 3
Mathis, David	Computer Technology Specialist 2
Rayburn, Nathan	Computer Technology Specialist 2
Simmons, Kristen	Administrative Specialist 3
Vossler, Steve	Water Management Specialist 3
Wickham, Brent	Computer Technology Specialist 1

GROUND WATER

NAME	TITLE
Lindemann, Lisa	**Administrator, Ground Water Division**
Miller, Linda	Administrative Specialist 2
Culver, Sheri	Administrative Specialist 1
Ebsen, Mike	Cooperative Programs Coordinator
Groth, Kristina	Administrative Specialist 2
Verplancke, Cheryl	Water Management Specialist 1
Lett, Sheryl	Water Management Specialist 1
Horgen, Scott	Water Management Specialist 1
Harju, John	Water Manager 3
Manley, Jeremy	Water Management Specialist 1
Rockweiler, Jed	Water Management Specialist 1
Helzer, Polly	Administrative Specialist 4
Neely, James	Water Management Specialist 2
Vacant	Water Management Specialist 1
Linn, Cindee	Administrative Specialist 3
Tebben, Beth	Water Management Specialist 2
McDonald, Doug	Administrative Specialist 2
Trujillo, Roxanne	Administrative Specialist 2
Wilber, P.J.	Water Management Specialist 1

STATE BOARD OF CONTROL

NAME	TITLE
Cunningham, Allan D.	**Administrator, Board of Control**
O'Dell, Michael	Water Manager 4
Rando, Cynthia	Water Management Specialist 2
Westbrook, Carol	Administrative Specialist 1
Vacant	Water Management Specialist 3
Crase, Niomi	Administrative Specialist 3
Duncan, Bonnie	Administrative Specialist 4
Dudrey, Linda	Administrative Specialist 2
Pierce, Dixie	Water Management Specialist 3
Lamblin, Cindy	Administrative Specialist 4
Tullis, Randy	**Superintendent**
Water Division No. I	Torrington
Whitaker, Michael B.	**Superintendent**
Water Division No. II	Sheridan
Smith, Loren.	**Superintendent**
Water Division No. III	Riverton
Henderson, Jade	**Superintendent**
Water Division No. IV	Cokeville

STATE BOARD OF CONTROL – BIG HORN ADJUDICATION

NAME	TITLE
McCann, Nancy	**Water Manager 3**
Hallberg, Debbie	Water Management Specialist 1
Wilson, Katina	Water Management Specialist 2
Henschel, Nathan	Water Management Specialist 2
Skoetsch, Connie	Administrative Specialist 3
Mumper, Karen	Water Management Specialist 2

INTERSTATE STREAMS

NAME	TITLE
Lowry, Sue	**Administrator, Interstate Streams**
Shields, John W.	Interstate Streams Engineer
Pring, Jodee	Water Planning Coordinator
Hoobler, Matt	North Platte Coordinator
Wolff, Steve	Colorado River Coordinator

WATER ADMINISTRATION PERSONNEL
(As of September 30, 2007)

Key to Title Abbreviations:

AS = Assistant Superintendent
HC = Hydrographer-Commissioner
AI = Acreage Inspector
WI = Well Inspector
PI = Pump Inspector
AHC = Assistant Hydrographer-Commissioner
NPAC = North Platte Accounting Coordinator

DIVISION I: PERSONNEL AT LARGE

TITLE	NAME	ADDRESS
Superintendent	Randy Tullis, h2odivone@netcommander.com	510 West 27th Torrington, Wyoming 82240
Assistant Superintendent	Al Prado, aprado@state.wy.us	PO Box 1368 Douglas, Wyoming 82633
Field Investigator	Rob Foreman, rforem@state.wy.us	510 West 27th Torrington, Wyoming 82240
Administrative Spec. 2	Sharon L. Hackett, shacke@state.wy.us	510 West 27th Torrington, Wyoming 82240

DIVISION I: WATER ADMINISTRATION PERSONNEL

DISTRICT	TITLE	NAME	ADDRESS
1	HC	Scott Ross, sross@seo.wyo.gov	P. O. Box 218 Meridan, WY 82081
2	HC	Gary Mehling, gmehli@state.wy.us	510 West 27th Torrington, Wyoming 82240
3,4C	HC	Doug Oliver, doliver@state.wy.us	1560 B Johnston St. Wheatland, Wyoming 82201
4A	HC	Darren Parkin, dparki@state.wy.us	Laramie Civic Center 710 Garfield, Room 114 Laramie, Wyoming 82070
4B	HC	Trevor Hiegel, thiege@seo.wyo.gov	Laramie Civic Center 710 Garfield, Room 114 Laramie, Wyoming 82070
6,7,8,16, 17,18	HC	Kevin Pantle	PO Box 710 Saratoga, Wyoming 82331
6,7,8,16, 17,18,	HC	Susan Adams	P.O. Box 710 Saratoga, Wyoming 82331

DIVISION I: WATER ADMINISTRATION PERSONNEL (cont'd)

DISTRICT	TITLE	NAME	ADDRESS
9	HC	Rod Oliver, rolive@state.wy.us	277 Dutton Creek Road Laramie, Wyoming 82070
13, 15-5,20	HC	Nate Weinand	117 S. 2nd St., Rm. 3 Douglas, Wyoming 82633
10,11, 12, Asst 14	HC	Jack Gibson, jgibso@state.wy.us	2020 Fairgrounds Rd., Ste. 104 Casper, Wyoming 82604
14	HC	Kent Becker, kbecke@sate.wy.us	510 West 27th Torrington, Wyoming 82240
6, 7, 8,16, 17, 18	AHC	Robin Blake	P.O. Box 244 Encampment, Wyoming 82325
19	AS	Al Prado, aprado@state.wy.us	PO Box 1368 Douglas, Wyoming 82633
North Platte River	Triangle PI	Tracy Brown	510 West 27th Torrington, Wyoming 82240
North Platte River	AI	J. Scott Haskamp, shaska@state.wy.us	2020 Fairground Rd. Ste. 104 Casper, WY 82604
North Platte River	AI	Chad Pickett, cpicke@state.wy.us	PO Box 710 Saratoga, Wyoming 82331
North Platte River	Triangle WI	Kelly Mehling, kmehli@state.wy.us	510 West 27th Torrington, Wyoming 82240
North Platte River	AI	Connie Kersting	1560 B Johnston Street Wheatland, Wyoming 82201
North Platte River	PI	Wray Lovitt	117 S. 2nd Street, Ste. 2B Douglas, Wyoming 82633
North Platte River	NPAC	Brian Pugsley, bpugsl@state.wy.us, nprwyact@communicomm.com	510 West 27th Torrington, Wyoming 82240

DIVISION II: PERSONNEL AT LARGE

TITLE	NAME	ADDRESS
Superintendent	Mike Whitaker, mwhita@seo.wyo.gov	1833 S. Sheridan Ave Sheridan, Wyoming 82801
Assistant Superintendent	Carmine LoGuidice, clogui@seo.wyo.gov	1833 S. Sheridan Ave Sheridan, Wyoming 82801
Administrative Spec. 2	Deborah Reed, dreed@seo.wyo.gov	1833 S. Sheridan Ave Sheridan, Wyoming 82801
CBNG Res. Inspector	David Schroeder, dschro@seo.wyo.gov	1833 S. Sheridan Ave Sheridan, Wyoming 82801
CBNG Res. Inspector	Kim French kfrenc@seo.wyo.gov	1833 S. Sheridan Ave. Sheridan, WY 82801

DIVISION II: WATER ADMINISTRATION PERSONNEL

DISTRICT	TITLE	NAME	ADDRESS
1,7,10	HC	Kody Steinbrecher, kstein@RangeWeb.net	113 S. 21st St. Sundance, Wyoming 82729
2,3,8, 9,11	AS	Carmine LoGuidice, clogui@seo.wyo.gov	1833 S. Sheridan Ave Sheridan, Wyoming 82801
2,3	HC	David Pelloux, dpello@seo.wyo.gov	1833 S. Sheridan Ave Sheridan, Wyoming 82801
4,5	HC	William Knapp, bknapp@seo.wyo.gov	1833 S. Sheridan Ave Sheridan, Wyoming 82801
8	HC	Sandy Dixon	PO Box 133 Kaycee, Wyoming 82639
5,6	HC	Pat Boyd, pboyd@seo.wyo.gov	1833 S. Sheridan Ave Sheridan, Wyoming 82801
1,8	HC	Roger Ralph, rralph@seo.wyo.gov	2020 Fairgrounds Road Ste 103 Casper, Wyoming 82601

DIVISION III: PERSONNEL AT LARGE

TITLE	NAME	ADDRESS
Superintendent	Loren Smith, lsmith@seo.wyo.gov	715 East Roosevelt Riverton, Wyoming 82501
Assistant Superintendent	David Deutz, ddeutz@seo.wyo.gov	2009 Big Horn Avenue, Ste 1 Worland, WY 82401
Administrative Spec. 2	Janet Wempen, jwempe@seo.wyo.gov	715 East Roosevelt Riverton, Wyoming 82501
Field Adjudication Inspector	Ryan Mikesell rmikes@seo.wyo.gov	715 East Roosevelt Riverton, WY 82501

DIVISION III: WATER ADMINISTRATION PERSONNEL

DISTRICT	TITLE	NAME	ADDRESS
At Large	AS	David Deutz, ddeutz@seo.wyo.gov	2009 Big Horn Ave, Ste. 1 Worland, WY 82401
1, 11	HC	Myron Smalley, msmall@seo.wyo.gov	715 East Roosevelt Riverton, Wyoming 82501
3	HC	Chance Fulk cfulk@seo.wyo.gov	715 East Roosevelt Riverton, Wyoming 82501
5, 14	HC	Tiffany Searcy tsearc@seo.wyo.gov	2009 Big Horn Ave., Ste 1 Worland, WY 82401
6,12	HC	Forest Sentinella fsente@seo.wyo.gov	2009 Big Horn Ave., Ste 1 Worland, WY 82401
7	HC	Gary Anders, gander@seo.wyo.gov	P. O. Box 263 Greybull, Wyoming 82426
8, 16	HC	Heber Jensen, hjense@seo.wyo.gov	1201 E. 7th Powell, WY 82435
9,10,15	HC	Landis Webber, lwebbe@seo.wyo.gov	1201 E. 7th Powell, WY 82435
13, 16	HC	Mike Riley, mriley@seo.wyo.gov	1201 E. 7th Powell, WY 82435

DIVISION IV: PERSONNEL AT LARGE

TITLE	NAME	ADDRESS
Superintendent	Jade Henderson, jhende@allwest.net, jhende@seo.wyo.gov	PO Box 277 Cokeville, Wyoming 83114
Assistant Superintendent	Kevin Payne kpayne@allwest.net kpayne@seo.wyo.gov	PO Box 277 Cokeville, Wyoming 83114
Administrative Spec. 3	Carol Reed, creed@seo.wyo.gov creed@allwest.net	PO Box 277 Cokeville, Wyoming 83114

DIVISION IV: WATER ADMINISTRATION PERSONNEL

DISTRICT	TITLE	NAME	ADDRESS
2,4,8,12	AS	Kevin Payne kpayne@allwest.net kpayne@seo.wyo.gov	PO Box 277 Cokeville, Wyoming 83114
1,3,9,14,15	LHC	John Yarbrough, jyarbr@seo.wyo.gov	PO Box 1208 Lyman, Wyoming 82937
5,6,7,10,11 ,13,16	LHC	Ed Boe eboe@centurytel.net eboe@seo.wyo.gov	PO Box 1080 Big Piney, Wyoming 83113
2	HC	Mike Johnson mjohns@allwest.net mjohns@seo.wyo.gov	PO Box 277 Cokeville, WY 83114
3	WC	Zach Rasmussen zrasmu@seo.wyo.gov	PO Box 1471 Lyman, WY 82937
4	WC	Don Shoemaker, shoemakerdnb@aol.com, dshoem@seo.wyo.gov	343 Ninth Street Evanston, Wyoming 82930
10,11,(7)	HC	Jeff Davis, jdavis@seo.wyo.gov	PO Box 1080 Big Piney, Wyoming 82941
5,6,10	W	VACANT	
7,10,(11)	HC	David Orzel, dorzel@centurytel.net, dorzel@seo.wyo.gov	PO Box 689 Pinedale, Wyoming 82941
8,12	WC	Ed Bruce	142 Allred Road Afton, Wyoming 83110
9	WC	Bill Marchione, williamm@hamsfork.net, wmarch@seo.wyo.gov	PO Box 605 Kemmerer, Wyoming 83101
13	WC	Jim Wilson, jim.wilson@sirsidynix.com jwilson@seo.wyo.gov	275 Yellow Rose Drive Alta, Wyoming 83414
14	WC	Todd Covolo, tscovolo@hotmail.com, tcovol@seo.wyo.gov	PO Box 1165 Lyman, WY 82937
15,(3,14)	HC	VACANT	

DISTRICT	TITLE	NAME	ADDRESS
16	WC	Bodean Barney, brbarney@bresnan.net	PO Box 9575 Jackson, Wyoming 83002-9575

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS
AND
PROFESSIONAL LAND SURVEYORS

NAME	POSITION
Whitman, David L.	President
Abell, Stanton J., Jr.	Vice President
Tyrrell, Patrick T.	Secretary-Treasurer
Ballard, John (Mike) M.	Member/Public
Jacobson, Roger	Member
Scott R. Pierson	Member
Peter J. Hutchison	Member

NAME	POSITION
Troy A. Niesen	Licensing Officer
Krista M. Wilson	Asst. Executive Director
Christine Turk	Executive Director

STATE BOARD OF EXAMINING WATER WELL DRILLING CONTRACTORS AND WATER WELL PUMP INSTALLATION CONTRACTORS

NAME	ADDRESS	PHONE NO.	E-MAIL	TERM EXPIRES *
Lisa Lindemann, State Engineer's Office	Herschler Bldg. 4E Cheyenne, WY 82002	307-777-5063	llinde@state.wy.us	3/31/2009
Kevin Frederick, WDEQ-WQD	Herschler Bldg. 4W Cheyenne, WY 82002	307-777-5985	kfrede@state.wy.us	3/31/2011
Jack Weber Weber Drilling	1305 Gregory Lane Jackson, WY 83001	307-733-3343 307-413-1596 (cell)	jacweber@wyoming.com	3/31/2011
Chuck Wilson Bronco Drilling	P.O. Box 836 Torrington, WY 82240	307-532-4882	NA	3/31/2009
LeRoy Christiansen DC Drilling	P.O. Box 749 Lusk, WY 82225	307-334-2196		3/31/2011
Steve Barbour Aqua Pumps	9406 N Hwy 14-16 Gillette, WY 82716	307-686-2573 307-660-2573 (cell)	sgb@wyoming.com	3/31/2009
Richard G. Stockdale	1704 Cheshire Drive Cheyenne, WY 82001	307-635-3602 307-630-5860 (cell)	NA	3/31/2009

* All terms expire March 31st of the year indicated.

Attorney General's Contact: 307-777-3435 (Fax)

Ken Nelson	2424 Pioneer Street 3rd Floor North. Cheyenne, WY 82002	307-777-7890	Knels03@state.wy.us

GROUND WATER ADVISORY COMMITTEES				
WATER DIVISION	NAME	ADDRESS	TERM EXPIRES	PHONE NO.
	Ben Jordan	1050 North 3rd Street, Suite E Laramie, WY 82072	9/30/10	745-6118
DIV. I	Michael Sweat	Cheyenne	9/30/12	
	Colby Drechsel colbydrechsel@yahoo.com	1233 South Jackson Casper, WY 82601	9/30/08	259-8459
	Harvey Crowe	587 South Buffalo, WY 82834	9/30/10	684-7477
DIV. II	Jerry Bush	Beulah	9/30/012	
	Thomas Pilch plich@wavecom.net	41 East Burkitt Sheridan, WY 82801	9/30/08	672-8750 Cell 899-4712
	Dan Wychgram	Thermopolis	9/30/12	
DIV. III	Ken Schreuder ees@wyoming.com	40 Meandering Way Lander, WY 82050	9/30/10	332-1528
	Doyle Ward tward@wyoming.com	P.O. Box 1841 Riverton, WY 82501	9/30/08	856-9014
	Vacant		9/30/12	
DIV. IV	Eugene B. Martin	P.O. Box 399 Evanston, WY 82930	9/30/08	789-3506
	Vacant		9/30/12	

GROUND WATER CONTROL AREA ADVISORY BOARD MEMBERS				
CONTROL AREA	NAME	ADDRESS	TERM EXPIRE	DISTRICT NO.
LARAMIE COUNTY ESTAB. 9/2/81	Mike Romsa	5260 Hwy 216 Albin, WY 82050	2011	DIST.5
	Donald Brown	PO Box 708 Pine Bluffs, WY 82082	2012	DIST.1
	Dale Martin	P.O. Box 391 Carpenter, WY 82054	2012	DIST.2
	David Cummings	10510 Powder House Cheyenne, WY 82009	2011	DIST. 4
	VACANT			
PLATTE COUNTY ESTAB. 10/7/81	Josh Graves	14 S. Antelope Creek Rd. Wheatland, WY 82201	2011	DIST.5
	Doug DeRouchey	P.O. Box 457 Wheatland, WY 82201	2008	DIST.1
	Clara Lou Johnson	29 West Johnson Road Wheatland, WY 82201	2008	DIST.2
	Bernard McGuire, Jr.	4398 Palmer Canyon Road Wheatland, WY 82201	2008	DIST.3
	David Hinman	62 Ferguson Rd. Wheatland, WY 82201	2011	DIST.4
PRAIRIE CENTER ESTAB. 12/2/77	John Ellis	Torrington	2010	
	Greg DesEnfants	5557 Road 118 Torrington, WY 82240	2011	
	Elden Baldwin	North Star Route Torrington, WY 82240	2011	
	Angie Babcock	13008 Rd. 43 Torrington, WY 82240	2010	
	Steve Roth	Torrington	2010	

WYOMING MEMBERS OF INTERSTATE COMPACT COMMISSIONS AND REGIONAL AND INTERSTATE COMMITTEES RELATING TO WATER RESOURCES

(As of September 30, 2008)

BEAR RIVER COMMISSION

(Idaho, Utah and Wyoming)

NAME, TITLE	POSITION
Patrick T. Tyrrell, State Engineer	Commissioner
Gordon Thornock	Commissioner
Sam Lowham	Commissioner
Erick Esterholdt	Alternate Commissioner
John Wagner, Administrator, Water Quality Division, Department of Environmental Quality	Water Quality Committee Member
Don Newton, Water Quality Division Department of Environmental Quality	Water Quality Committee Alternate
Jade Henderson, Superintendent Water Division IV	Alternate Commissioner, Technical Advisory Committee Member
Sue Lowry, Administrator Interstate Streams	Alternate Commissioner, Technical Advisory Committee Member

UPPER COLORADO RIVER COMMISSION

(Colorado, New Mexico, Utah and Wyoming)

NAME, TITLE	POSITION
Patrick T. Tyrrell, State Engineer	Commissioner
Daniel S. Budd, Interstate Stream Commissioner	Alternate Commissioner
Benjamin C. Bracken	Alternate Commissioner
John W. Shields, Interstate Streams Engineer	Chairman and Member, Engineering Committee
Peter K. Michael, Senior Assistant Attorney General Attorney General's Office	Member, Legal Committee

COLORADO RIVER MANAGEMENT WORK GROUP

(for development of the Colorado River Annual Operating Plan [AOP])

NAME, TITLE	POSITION
John W. Shields, Interstate Streams Engineer	Member

COLORADO RIVER COMMITTEE OF FOURTEEN

NAME, TITLE	POSITION
Patrick T. Tyrrell, State Engineer	Member
John W. Shields, Interstate Stream Engineer	Member

COLORADO RIVER BASIN SALINITY CONTROL ADVISORY COUNCIL

NAME, TITLE	POSITION
Patrick T. Tyrrell, State Engineer	Member
Daniel S. Budd, Interstate Stream Commissioner	Member
John Wagner, Administrator, Water Quality Division Department of Environmental Quality	Member

COLORADO RIVER BASIN SALINITY CONTROL FORUM

NAME, TITLE	POSITION
Patrick T. Tyrrell, State Engineer	Member
Daniel S. Budd, Interstate Stream Commissioner	Member
John Wagner, Administrator, Water Quality Division Department of Environmental Quality	Member
John W. Shields, Interstate Streams Engineer	Work Group Member
David Waterstreet, Water Quality Division Department of Environmental Quality	Work Group Member

GLEN CANYON ADAPTIVE MANAGEMENT PROGRAM

NAME, TITLE	POSITION
John W. Shields, Interstate Streams Engineer	Work Group Member and Technical Work Group Member
Don Ostler, Executive Director Upper Colorado River Commission	Alternate Work Group and Alternate Technical Work Group Member

RECOVERY IMPLEMENTATION PROGRAM FOR ENDANGERED FISH SPECIES IN THE UPPER COLORADO RIVER BASIN

NAME, TITLE	POSITION
Patrick T. Tyrrell, State Engineer	Recovery Implementation Committee Member
John W. Shields, Interstate Streams Engineer	Management Committee Member and Chairman
Kevin Gelwicks, Wyoming Game and Fish Department Through June 30, 2008 Pete Cavalli, Wyoming Game and Fish Department	Biology Committee Member

From July 1, 2008	

COLORADO RIVER WATER USERS ASSOCIATION

NAME, TITLE	POSITION
John A. Zebre, Citizen	Member, Board of Trustees; Program Committee Member, Exhibits Committee Member and Housing and Arrangements Committee Member
Alan W. Harris, Citizen	Member, Board of Trustees; Audit Committee Member, Membership Committee Member and Nominations Committee Member
Benjamin C. Bracken, Citizen	Member, Board of Trustees; and Public Affairs Committee Member
John W. Shields, Interstate Streams Engineer	Chairman, Resolutions Committee
Bryan Seppie, Citizen	Exhibits Committee Member
Janelle M. Shields, Citizen	Spouses Committee Member

MISSOURI RIVER ASSOCIATION OF STATES AND TRIBES (MoRAST)

NAME, TITLE	POSITION
Sue Lowry, Administrator Interstate Streams	Director
Jodee Pring, Water Planning Coordinator	Alternate

MISSOURI RIVER RECOVERY IMPLEMENTATION COMMITTEE (MRRIC)

NAME, TITLE	POSITION
Sue Lowry, Administrator Interstate Streams	Representative
Jodee Pring, Water Planning Coordinator	Alternate

MISSOURI RIVER ECOSYSTEM RESTORATION PLAN (MRERP)

NAME, TITLE	POSITION
Sue Lowry, Administrator Interstate Streams	Cooperating Agency Representative
Jodee Pring, Water Planning Coordinator	Alternate

UPPER MISSOURI WATER ASSOCIATION
(Montana, North Dakota, South Dakota and Wyoming)

NAME, TITLE	POSITION
Sue Lowry, Administrator Interstate Streams	President

YELLOWSTONE RIVER COMPACT COMMISSION

(Montana, North Dakota and Wyoming)

NAME, TITLE	POSITION
Patrick T. Tyrrell, State Engineer	Commissioner
Sue Lowry, Administrator Interstate Streams	Advisor
Sue Lowry, Administrator Interstate Streams	Technical Committee Member
Michael Whitaker, Superintendent Water Division II	Technical Committee Member

BELLE FOURCHE RIVER COMPACT

(South Dakota and Wyoming)

NAME, TITLE	POSITION
Patrick T. Tyrrell, State Engineer	Member
Sue Lowry, Administrator Interstate Streams	Advisor

UPPER NIOBRARA RIVER COMPACT

(Nebraska and Wyoming)

NAME, TITLE	POSITION
Patrick T. Tyrrell, State Engineer	Member
Sue Lowry, Administrator Interstate Streams	Advisor
Jodee Pring, Water Planning Coordinator	Advisor

PLATTE RIVER COOPERATIVE AGREEMENT

NAME, TITLE	POSITION
Michael K. Purcell, Administrator, Water Development Commission	Governance Committee Member
Patrick T. Tyrrell, State Engineer	Governance Committee Alternate
Norm Demott – Water Users – Lower North Platte, WY	Governance Committee Member*
Herman Strand – Water Users – Central North Platte, WY	Governance Committee Member*
Dennis Strauch – Water Users – Lower North Platte, NE	Governance Committee Member*
George Williams – Water Users – Upper North Platte, WY	Governance Committee Member*
Michael K. Purcell, Water Development Commission	Finance Committee Member

Mike Besson, Water Development Commission	Water Advisory Committee Member
Matt Hoobler, North Platte River Coordinator	Water Advisory Committee Alternate
Dennis Strauch – Water Users Representative	Water Advisory Committee Member
Mike Besson, Water Development Commission	Technical Advisory Committee/Adaptive Management Work Group Member
Harry LaBonde, Deputy State Engineer	Land Advisory Committee Member
Randy Tullis, Superintendent Water Division I	Environmental Account Committee Member
Mike Besson, Water Development Commission	Environmental Account Committee Alternate

* 4 members split 1 vote

NORTH PLATTE DECREE COMMITTEE

NAME, TITLE	POSITION
Patrick T. Tyrrell, State Engineer	Wyoming Representative
Randy Tullis, Superintendent Water Division One	Alternate, Wyoming Representative
Matt Hoobler, North Platte River Coordinator	Member, Official Files Subcommittee
Randy Tullis, Superintendent Water Division One	Member, Crest Control Subcommittee
Lisa Lindeman, Administrator, Ground Water Division	Chair, Ground Water Wells Subcommittee
Matt Hoobler, North Platte River Coordinator	Member, Ground Water Wells Subcommittee
Matt Hoobler, North Platte River Coordinator	Member, State Line Gage Subcommittee
Sue Lowry, Administrator Interstate Streams	Member, By-Laws Subcommittee
Matt Hoobler, North Platte River Coordinator	Chair, Finance Subcommittee
Randy Tullis, Superintendent Water Division One	Member, Consumptive Use Subcommittee
Matt Hoobler, North Platte River Coordinator	Member, Consumptive Use Subcommittee
Matt Hoobler, North Platte River Coordinator	Member, Replacement Water Subcommittee

SNAKE RIVER COMPACT
(Idaho and Wyoming)

NAME, TITLE	POSITION
Patrick T. Tyrrell, State Engineer	Member
Sue Lowry, Administrator Interstate Streams	Advisor

SNAKE RIVER COMMITTEE OF NINE

NAME, TITLE	POSITION
Patrick T. Tyrrell, State Engineer	Advisory Member

OGALLALA AQUIFER INSTITUTE
(Wyoming, South Dakota, Colorado, Nebraska, Kansas, Oklahoma, Texas, New Mexico)

NAME, TITLE	POSITION
Sue Lowry, Administrator Interstate Streams	Member and Treasurer

WESTERN STATES WATER COUNCIL

NAME, TITLE	POSITION
The Honorable Dave Freudenthal, Governor	Governor Member
Patrick T. Tyrrell, State Engineer	Member
Peter K. Michael, Senior Assistant Attorney General Attorney General's Office	Member
John Corra, Administrator Department of Environmental Quality	Member
Michael K. Purcell, Administrator Water Development Commission	Alternate
Sue Lowry, Administrator Interstate Streams	Alternate
John Wagner, Administrator Water Quality Division, Department of Environmental Quality	Alternate

ASSOCIATION OF STATE DAM SAFETY OFFICIALS

NAME, TITLE	POSITION
Larry Stockdale, Safety of Dams Engineer	State Representative

INTERSTATE COUNCIL ON WATER POLICY

NAME, TITLE	POSITION
Sue Lowry, Administrator Interstate Streams	Chair, Legislative and Policy

	Committee